

**FACTORS AFFECTING WHOLE
GRAIN CONSUMPTION: PRIMARY FOCUS HEALTH FACTORS**

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B.S., Alcorn State University, 2006

**A THESIS
submitted in partial fulfillment of
the requirements for the degree**

MASTER OF SCIENCE

**Department of Agricultural Economics
College of Agriculture**

**KANSAS STATE UNIVERSITY
Manhattan, Kansas**

2008

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Abstract

We designed a mail survey to investigate consumer choices between whole-grain and regular grain products. Consumption of whole-grain foods has been linked to numerous health benefits including reduced risk of heart disease, diabetes and obesity. The prevalence of obesity has increased in recent decades and has been shown to be negatively correlated with education levels and income.

Data from the survey are used to investigate correlations between the likelihood of choosing whole-grain alternatives and various demographic and behavioral characteristics including an individual's Body Mass Index (BMI). We also investigate the impact on consumer choices of providing information about the health benefits of whole-grain foods.

Results indicate that education level and the use of food labels are both positively correlated with the likelihood of choosing whole-grain foods. Provision of information about health benefits also had a positive impact on the likelihood of choosing a whole-grain over a conventional grain product, but given a low sample size in this study the effect was not statistically significant. Choices were found to be largely insensitive to changes in relative prices, and no correlation was found between BMI and the likelihood of choosing a whole-grain product.

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Acknowledgments

At this point I would like to thank god for giving me the abilities needed to successfully complete this project. I also would like to thank my family for their support and encouragement, Alicia Goheen for her technical support, my committee members for their guidance and patience; especially my major professor, Sean Fox, and finally Kyrie Graves for her support.

Chapter 1: Introduction

The issue of obesity in the U.S population has been receiving more attention over the past decade. An individual is considered obese when their body mass index (BMI) exceeds 30. BMI is calculated by dividing a person's weight in kilograms by their height in meters squared (USDHHS-CDC, 2007; Endocrine Society, 2004). Many Americans suffer from obesity and the side effects of obesity. The likelihood of being diagnosed with hypertension, cardiovascular disease, colon and rectal cancers are increased as an individual's BMI increases (WHO, 2006).

Table 1 provides statistics about obesity rates by gender and age group for two different time periods – 1988 to 1994 and 1999 to 2002. The statistics are from the National Health and Nutrition Examination Survey (NHANES) conducted by the Centers for Disease Control (CDC) and based on a nationally representative sample of the US population. The data indicate that prevalence of obesity increased in all age groups for both males and females between the two periods. Among females aged 65 to 74, the rate of obesity increased by 12.4 percentage points, from 26.9% to 39.3%. In all age groups the data indicate higher rates of obesity among women than among men agreeing with findings by Drewnowski and Specter (2002) and Zhang and Wang (2004).

Table 2 shows how obesity rates vary with levels of education. As the level of education increases the proportion classified as obese decreases, suggesting an inverse relationship between education and obesity rates. Table 2 also shows increasing rates of obesity in all educational categories over time.

Table 1

| Age | Prevalence of Obese Individuals | | | | | |
|--------------|---------------------------------|-----------|------------|-----------|-----------|------------|
| | Men | | | Women | | |
| | 1988-1994 | 1999-2002 | Difference | 1988-1994 | 1999-2002 | Difference |
| 20-34 | 14.1 | 21.7 | 7.6 | 18.5 | 28.4 | 9.9 |
| 35-44 | 21.5 | 28.5 | 7 | 25.5 | 32.1 | 6.6 |
| 45-54 | 23.2 | 30.6 | 7.4 | 32.4 | 36.9 | 4.5 |
| 55-64 | 27.2 | 35.5 | 8.3 | 33.7 | 42.1 | 8.4 |
| 65-74 | 24.1 | 31.9 | 7.8 | 26.9 | 39.3 | 12.4 |
| 75 and older | 13.2 | 18 | 4.8 | 19.2 | 23.6 | 4.4 |

source: <http://www.obesityinamerica.org/trends.html>

Table 2

| Education Level | Percentage of Obese Individuals by Level of Education | | | | | |
|---------------------|---|------|------|------|------|------|
| | 1991 | 1995 | 1998 | 1999 | 2000 | 2001 |
| < High School | 16.5 | 20.1 | 24.1 | 25.3 | 26.1 | 27.4 |
| High School Diploma | 13.3 | 16.7 | 19.4 | 20.6 | 21.7 | 23.2 |
| Some College | 10.7 | 15.1 | 17.8 | 18.1 | 19.5 | 21 |
| College | 8 | 11 | 13.1 | 14.3 | 15.2 | 15.7 |

source: <http://www.obesityinamerica.org/trends.html>

In general, a person becomes obese when they consume more calories than needed and the body stores the excess calories in the form of fat (Goldberg et al. 2004; Jen 2004). Eating less may not be the best way to fight obesity. The body constantly stores information on sleep cycles, work cycles, and eating cycles and when an individual eats less the body may process this as starvation and cause the individual to go on an eating binge. The body would then store more food from this eating binge in anticipation of another starvation period causing a continued struggle with weight maintenance (Cutler, Glaeser, and Shapiro, 2003).

Obesity is not necessarily a result of over-eating or binge eating, but possibly a result of poor diet, basically eating the wrong types of foods (USDHHS-CDC, 2007). Fast food has become more prevalent in American society (Prentice and Jebb,

2003) precooked/prepackaged meals have become more commonplace in American homes (Lakdawalla and Philipson, 2002; Variyam, 2004; Nayaga, 1996).

Childhood obesity is also receiving a lot of attention (Cavadini et al. 2000; Ogden et al. 2002). Lack of funding for school programs, particularly sports and physical education, is often blamed for children being less active than children of previous generations (USDHHS-CDC, 2007). However, nutrition likely also plays an important role in childhood obesity (MacInnis and Rausser, 2005). To combat obesity dietitians and physicians recommend eating healthier and incorporating exercise into a person's daily regimen. They also recommend eating regularly, eating small portions, and following the dietary guidelines for recommended food intake (Young and Nestle, 2002). Another option is public education programs (Welsh et al. 1992), there is mounting evidence that these programs may be effective (e.g., Alston, Chalfant, and James 1999; Nayga 2001).

Healthy People 2010 is a program created by the Department of Health and Human Services which sets national goals for improving health and disease prevention in the United States. One goal of *Healthy People 2010* is to increase the percentage of people who eat at least six daily servings of grain products, with a minimum of three servings of whole-grains (USDHHS, 2005).

1.1 Whole-Grain Foods

Grain based foods are a staple of the American diet and diets around the world. A kernel has three components — bran, germ, and endosperm. The bran is the outermost layer, the germ is the seed, and the endosperm is the energy-rich layer between the bran and the germ (Higgins, 2007). In processing, much of the bran and

some of the germ is removed. This results in the loss of vitamins, minerals and dietary fiber. Enriched grains are processed grains to which essential vitamins and minerals are added later in processing. Thus, consumers can typically choose between two types of grain products: refined or enriched grain products, and whole-grain products made from grains that have not lost any of their components during processing.

Three of the most commonly consumed grain based products in the U.S. are bread, rice and pasta. Bread is available in whole-grain (typically brown) or enriched (typically white) forms. The most popular whole-grain variety of bread is wheat bread. Rice is typically a complementary dish in American meals, and like bread, comes in two varieties - whole-grain rice (brown rice) and regular enriched rice (white rice). Pasta products such as fettuccine, spaghetti, etc are also available in whole-grain and enriched varieties. Whole-grain foods are recognized as a good source of nutrients including fiber, trace minerals, and certain vitamins.

1.2 Health and Whole-grains

One key difference between whole-grain products and refined grain products is the level of fiber remaining in the product. While vitamins and minerals are placed back into enriched grains, whole-grains contain more vitamins and minerals, and are significantly richer in fiber (Higgins, 2007). Fiber can only be found in plants and is believed to be a key nutrient in weight maintenance. Since the body takes longer to digest fiber it creates a feeling of fullness which causes an individual to eat less when high fiber foods are part of a meal. Moreover, the fiber causes an individual to feel full over a longer period of time, therefore the person eats less often. Thus, since

whole-grains are high in fiber, whole-grain foods may have a positive effect on weight maintenance (Higgins, 2007).

A study at the Harvard School of Public Health, found that “women who ate three or more servings of whole-grains daily gained significantly less weight over a twelve-year period than woman who ate refined grains” (Lui et al., 2003). Koh-Banerjee et al. (2004) in a study with over 27,000 men found that a 40grams per day increase in whole-grain intake was associated with a 1.1 kilogram reduction in long term weight gain. The study also showed that other components in whole-grains beyond bran and fiber may influence weight gain in the long term.

Among the other health benefits of whole-grains is the potential to reduce the risk of heart disease. Eating whole-grains could lead to a lowering of cholesterol levels, and diets with more whole-grains may also lower an individual’s chances of getting cardiovascular disease. Women who eat whole-grains may also reduce their likelihood of developing breast and ovarian cancer. Both men and women who have higher whole-grain intakes are less likely to develop colon cancer (AICR). Consumption of whole-grains may also help lower a person’s risk of becoming diabetic. Responding to a growing proof about health benefits, the U. S. Government has been promoting the use of more whole-grains in the American diet (USDA, 2005).

1.3 Prior Research

According to USDA (2005), Americans consume a lot of refined grain and not enough whole-grain products. During 1994-96 and 1998, Americans ate 6.7 ounces of total grains per day, or 106 percent of the daily recommendation. They consumed 77 percent more refined grains than recommended, but only 34 percent of the

recommended amount of whole-grains. Children favored refined over whole-grains, even more so than adults, and the presence of children in the home had a negative effect on adults' whole-grain consumption (Dietary Guidelines Advisory Committee, 2004).

Most whole-grains are consumed in the form of breakfast foods, with Americans eating 40 percent of their whole-grains at breakfast, 23 percent at lunch, 17 percent at dinner, and the remaining 20 percent in the form of snack foods (Biing-Hwan and Yen, 2007).

USDA (2005) found that income and education had a positive effect on wholegrain consumption. Consumers with the highest wages in the sample (300 percent of poverty or higher) ate 37 percent of the recommended whole-grain servings, compared to 31 for individuals in the lowest income bracket (130 percent of poverty or lower). College-educated individuals consumed a higher percentage of the whole-grain recommendation compared to those who did not attend college.

Adults who use labels tend to consume more whole-grains than adults who do not read labels (USDA, 2005). The same study also found that men consume more refined and whole-grain than women, and that younger adults (age 20-60) consume less whole-grain but more refined grain than older adults (over 60) (USDA, 2005).

1.4 Objectives

The purpose of this study is to investigate social, economic, demographic, and behavioral factors associated with consumption of whole-grain products. We investigate whether an individual's health factors, specifically their BMI, is correlated with the likelihood of choosing whole-grain versus regular (enriched) grain products

and the extent to which the choice is influenced by the relative price of the two products.

Using a mail survey we also investigate the effect of providing information about the health benefits of whole-grains on consumers' likelihood of purchasing whole-grain products. To do so we provided half of our survey sample with information about those health benefits. The design allows us to hypothesize:

H1: Informing respondents about the health benefits of whole-grains increases the likelihood that they will chose a whole-grain product instead of a regular (enriched) grain product.

The econometric model allows us to test similar hypotheses related to product prices and individuals demographics characteristics. The following section will explain the survey design and provides a summary of the data collected.

Chapter 2: Survey Design and Data

The data for this study were obtained by means of a mail survey. The survey was designed to elicit consumer perceptions of and willingness-to-pay (WTP) for whole grain foods, and to investigate the possibility of a link between consumption of whole grain foods and obesity. It included 30 questions soliciting information about grain food consumption, factors influencing purchasing decisions, preferences for whole grain products, and consumer demographics. The survey required approximately eight to ten minutes to complete.

A pretest was conducted in Manhattan, Kansas in February 2008. A sample of 100 names was drawn from the local telephone directory using a technique based on the random number generator in MS Excel. Appendix A provides specific details about how the sample was generated in addition to a summary of the data collected. There were two versions of the questionnaire. The only difference between the two was that one contained health information related to whole grain products, whereas the other version contained no additional health information. The health information included in version 1 was as follows:

Health Benefits of Whole Grain Foods

While enriched grain products are a good source of iron and B vitamins such as thiamine, niacin, riboflavin and folic acid, consumption of **whole grain products** has been linked to numerous health benefits. These benefits include reduced risk of heart disease, cancer and diabetes. Evidence also suggests that whole grain foods may contribute to achieving and maintaining a healthy weight.

Following the pretest one change was made to the instrument. In particular, we changed the format of the question used to elicit willingness-to-pay (WTP) for whole grain versus conventional products. In the pretest we used a double-bounded discrete choice type question. However, several respondents failed to answer the follow up question or answered the wrong follow-up question. We therefore decided to use a simpler version of the willingness-to-pay question - a single discrete choice question in which the conventional product was offered at a fixed price for all respondents, while the price of the whole grain product varied across respondents between one of five different levels. Appendix B contains a copy of the survey instrument.

Base prices for the conventional (enriched) variety of each product were set at \$2.09, \$1.79, and \$1.49 respectively for bread, rice and pasta. Prices for the whole grain alternative ranged from a 30 cent discount in increments of 30 cents to a premium of 90 cents - a range chosen based on the distribution of WTP responses from the pretest. Thus, within each of the two versions of the survey we had five subversions, a) through e), with varied price levels in the WTP question. The questions eliciting WTP for whole-grain bread, rice and pasta were as follows:

Question 12-Bread

If you were purchasing one loaf of bread at your local supermarket and you could choose between whole wheat bread (at a) \$1.79, b) \$2.09, c) \$2.39, d) \$2.69, e) \$2.99 for a 12oz loaf) and the same brand of enriched white bread (at \$2.09 for a 12oz loaf), which type of bread would you buy? *(Please mark only one answer)*

Question 13-Rice

If you were purchasing a single 2 lb (32 ounce) bag of rice at your local supermarket and you could choose between whole grain rice (at a) \$2.69, b) \$1.49, c) \$1.79, d) \$2.09, e) \$2.39 for a 2 lb bag) and the same brand of enriched white rice (at \$1.79 for a 2 lb bag), which type of rice would you buy? *(Please mark only one answer)*

Question 14-Pasta

If you were purchasing a single 1 lb (16 ounce) package of pasta at your local supermarket and you could choose between whole grain pasta (at a) \$2.09, b) \$2.39, c) \$1.19, d) \$1.49, e) \$1.79 for a 1 lb package) and the same brand of enriched white pasta (at \$1.49 for a 1 lb package), which type of pasta would you buy? *(Please mark only one answer)*

In each question the respondent was asked to check one of the following response options:

_____ I'd definitely buy the whole grain 12) bread, 13) rice and 14) pasta.

_____ I'd probably buy the whole grain 12) bread, 13) rice and 14) pasta.

_____ I'd be unsure but leaning towards whole grain 12) bread, 13) rice and 14) pasta.

_____ I'd be unsure but leaning towards enriched white 12) bread, 13) rice and 14) pasta.

_____ I'd probably buy the enriched white 12) bread, 13) rice and 14) pasta.

_____ I'd definitely buy the enriched white 12) bread, 13) rice and 14) pasta.

In March 2008, the survey was mailed to a random sample of 200 households in Topeka, Kansas, with each of the 10 subversions administered to 20 households. The sample was generated in the same manner as that for the pretest. A total of 65 responses were obtained, representing a response rate of 34.4 percent, after allowing for 11 undeliverable surveys.

2.1 Data

2.1.1 Demographics

Approximately 70 percent of respondents were married (table 3) with, about 10 percent indicating children under the age of six in the household, and almost 20 percent having children between the age of six and eighteen. About 40 percent of respondents lived in two person households, while less than 10 percent dwelled in households with five or more people. The majority (approximately 62 percent) had household income greater than \$50,000, with 20 percent indicating an annual household income between \$70,000 and \$100,000. About 80 percent of respondents were female. Approximately 13 percent of were under 40 years of age, while almost 55 percent were over 56 years of age, with respondent average age being about 57 years. About 97 percent of respondents indicated they had complete high school, with 44 percent having some college education, while nearly 35 percent of respondents were college graduates.

Forty five of sixty three respondents (71 percent) indicated they were not at what they would consider their ideal weight. Fifty-nine out of sixty-five respondents provided information about both their height and weight. Average height for those respondents was about 70 inches and average weight approximately 175 pounds. The information on height and weight was used to calculate respondent BMI's by dividing weight in pounds by height in inches squared then multiplying by 703 $[(lbs/ht^2)*703]$. Average BMI was 24.9 – on the border between the “normal” and “overweight” categorizations. Fort of the fifty-nine respondents (68 percent) had

BMIs that would indicate they were overweight, with approximately 35 percent falling into the obese category (table 3).

Table 3: Demographic characteristics of respondents

| Demographic Characteristic | Range | Percentage |
|-----------------------------------|--|-------------------|
| Gender | Male | 20.63% |
| | Female | 79.37% |
| Age | less than or equal to 25yrs of age | 1.59% |
| | 26-40 yrs of age | 11.11% |
| | 41-55 yrs of age | 33.33% |
| | 56-70 yrs of age | 36.51% |
| | greater than or equal to 71 yrs of age | 17.46% |
| Education | Some high school | 3.17% |
| | High school graduate | 17.46% |
| | Some college | 44.44% |
| | College graduate | 20.63% |
| | Post graduate | 14.29% |
| Income | Less than \$20,000 | 8.62% |
| | \$20,000 up to \$30,000 | 10.34% |
| | \$30,000 up to \$40,000 | 3.45% |
| | \$40,000 up to \$50,000 | 15.52% |
| | \$50,000 up to 70,000 | 17.24% |
| | \$70,000 up to 100,000 | 20.69% |
| | \$100,000 up to 150,000 | 17.24% |
| | more than \$150,000 | 6.90% |
| Marital Status | Single | 11.11% |
| | Married | 68.25% |
| | Have partner (unmarried) | 1.59% |
| | Divorced | 6.35% |
| | Spouse Deceased | 12.70% |
| BMI | BMI \leq 18.5 (Underweight) | 1.69% |
| | 18.6 \leq BMI \leq 24.9 (Normal Weight) | 30.51% |
| | 25 \leq BMI \leq 29.9 (Overweight) | 32.20% |
| | 30 \leq BMI \leq 34.9 (Obese) | 28.81% |
| | 35 \leq BMI \leq 39.9 (Moderately Obese) | 3.39% |
| | BMI \geq 40 (Morbidly Obese) | 3.39% |
| Children under 6 | Yes | 11.11% |
| | No | 88.89% |
| Children between 6 and 18 | Yes | 19.05% |
| | No | 80.95% |

2.1.2 Shopping, Exercise Habits and use of Labels

Bread was consumed in every household, with 58 percent of respondent households consuming bread every day (table 4). All respondent households also consumed pasta, albeit far less frequently than bread, with over 60 percent indicating consumption less frequently than once a week. Similarly, more than 70 percent eat rice less than once a week.

Fifty-three percent of respondents ate out 1-3 times a week, with 16 percent eating out more than four times a week. Almost 1 in 4 respondents indicated they exercise hardly ever exercise with 32 percent exercising 4 or more time per week (table 4). Approximately 29 and 27 percent of respondents *always* check labels for nutrition and ingredient information respectively, with only 6 percent indicating they *never* check labels for that information. Only 7 percent *always* check for country of origin, whereas more than 50 percent *always* check for expiration or sell-by date information.

When respondents were asked how often *nutritional value*, *price* and *taste* influenced their purchases, responses indicated that all three characteristics influenced the purchase decision for bread more frequently than for either rice or pasta. For all three products, bread, rice and pasta, *taste* was the most important influence, followed by *nutritional value* and *price*.

Respondents were also asked, using a multiple choice format, how many calories they believed were in a McDonald's Big Mac (approx 550) and a 12oz. can of regular soda (approx 150). Most respondents, around 70 percent, over estimated the number of calories in a Big Mac, with approximately 40 percent over estimating

by 500 calories. Similarly, about 50 percent overestimated the number of calories in a can of soda, with 35 percent over-estimating by 100 calories or more. Fewer than 16 percent underestimated the number of calories in either product.

Table 4: Respondent Behavior

| Consumer Behavior | Options | Percentage |
|--------------------------|----------------------------|-------------------|
| Bread Consumption | every day | 57.81% |
| | 3 to 4 times/week | 29.69% |
| | 1 to 2 times/week | 10.94% |
| | less than once per week | 1.56% |
| | never, we do not eat bread | 0.00% |
| Rice Consumption | every day | 0.00% |
| | 3 to 4 times/week | 6.25% |
| | 1 to 2 times/week | 21.88% |
| | less than once per week | 65.63% |
| | never, we do not eat rice | 6.25% |
| Pasta Consumption | every day | 1.56% |
| | 3 to 4 times/week | 6.25% |
| | 1 to 2 times/week | 29.69% |
| | less than once per week | 62.50% |
| | never, we do not eat pasta | 0.00% |
| Eating Out | Hardly ever | 30.65% |
| | 1-3 times each week | 53.23% |
| | 4-6 times each week | 11.29% |
| | 7 or more times each week | 4.84% |
| Exercise | Hardly ever | 23.81% |
| | 1-3 times each week | 44.44% |
| | 4-6 times each week | 30.16% |
| | 7 or more times each week | 1.59% |

| Table 4: Respondent Behavior continued...Check label for | | |
|---|----------------|-------------------|
| Consumer Behavior | Options | Percentage |
| Nutrition | Never 1 | 6.35% |
| | 2 | 3.17% |
| | Sometimes 3 | 23.81% |
| | 4 | 38.10% |
| | Always 5 | 28.57% |
| Country of origin | Never 1 | 44.26% |
| | 2 | 11.48% |
| | Sometimes 3 | 24.59% |
| | 4 | 13.11% |
| | Always 5 | 6.56% |
| Ingredients | Never 1 | 6.35% |
| | 2 | 6.35% |
| | Sometimes 3 | 25.40% |
| | 4 | 34.92% |
| | Always 5 | 26.98% |
| Expiration or sell-by date | Never 1 | 1.59% |
| | 2 | 7.94% |
| | Sometimes 3 | 19.05% |
| | 4 | 20.63% |
| | Always 5 | 50.79% |

2.2 Choices for Whole-Grain Foods

All but one respondent had some knowledge of whole-grain foods, with about 77 percent indicating they knew “*quite a lot*” about whole-grains as opposed to “*not much*.” Fifty-eight percent indicated they got their information about whole-grains from product labels, while 49 percent indicated they got their information from newspapers or magazines, and 20 percent from radio or television.

Approximately 95 percent of respondents indicated they *sometimes* look for whole-grain bread, with about 63 percent indicating they *always* look for the whole-grain version. Fewer respondents sought out whole-grain rice or pasta products with about 67 percent *sometimes* seeking whole-grain rice, and 73 percent sometimes seeking whole-grain pasta. Only 17 and 13 percent *always* sought whole-grain rice and pasta respectively.

Questions 12, 13, and 14 asked respondents to make a choice between a whole-grain version and a conventional version of bread, rice and pasta respectively. Table 5 shows the percentage of respondents choosing the whole-grain product at each of the five relative prices at which the whole-grain product was offered. To facilitate comparison across the three products, table 5 aggregates the response categories “*definitely choose whole grain*,” “*probably choose whole grain*,” and “*unsure but leaning towards whole grains*” into a single percentage indicating preference for whole-grain.

Table 5 shows that when the whole-grain product is priced at a 30 cent discount to the conventional product, 100%, 60% and 45% of respondents would choose whole-grain bread, rice and pasta respectively. As the price of whole-grain

bread and rice increases the proportion choosing the product falls – as would be expected for normal goods. Thus, when priced equal to the conventional product, the proportions choosing whole-grain bread and rice were 91% and 58%, and when price at a 30 cent premiums those proportions were 74% and 50%. As the premium increases more however, the proportions choosing the whole-grain product actually increase. When whole-grain bread is priced at a 90 cent premium to regular enriched bread, the proportion choosing the whole-grain bread is 100%.

The pattern for whole-grain pasta is particularly interesting as the proportion choosing the whole-grain product is actually lowest when whole-grain product is offered at a discount, and highest when offered at a 60 cent premium. These patterns may possibly be a consequence of the small sample size since we have as few as nine respondents at some prices. However, the patterns may also reflect a price-dependent-preference type effect – whereby the higher price is a signal to the respondent of higher quality.

Comparing across products, we find that the proportion choosing whole-grain bread is always higher than that choosing whole-grain rice or pasta at the equivalent price premium. Note however, that these proportions indicating preference for the whole grain product appear to be unusually high relative to the market and likely reflect a ‘yea-saying’ type bias (Holmes and Kramer, 1995) on the part of respondents. In the market, whole wheat output accounted for only 4% of the domestic market for wheat flour in 2006-07 (Sosland, 2007).

Table 5: Proportion choosing whole-grain product

| Premium | Bread | Rice | Pasta |
|-------------|-------|------|-------|
| -30c | 100% | 60% | 45% |
| 0 | 91% | 58% | 53% |
| +30c | 74% | 50% | 60% |
| +60c | 80% | 70% | 78% |
| +90c | 100% | 67% | 55% |

2.2.1 Choices for Whole-Grain Bread

Table 6 shows how the distribution of responses across the six response categories from “*definitely buy whole grain bread*” to “*definitely buy enriched white bread*” changes as the relative price of whole-grain bread increases.

Respondents indicated they would purchase whole-grain bread 100 percent of the time when offered at either a 30 cent discount or a 90 cent premium to conventional white bread priced at \$2.09 for a 20 ounce loaf. Interestingly, the proportion indicating that they would “*definitely buy the whole-wheat bread*” was higher at the 90 cent premium (90%) than at the 30 cent discount (66.7%).

Table 6: Proportion choosing whole-grain bread

| Choice | Price Premium | | | | |
|--|---------------|-------|-------|-------|-------|
| | -0.30 | 0 | 0.30 | 0.60 | 0.90 |
| I'd definitely buy the <u>whole wheat</u> bread | 66.7% | 90.9% | 42.1% | 40.0% | 90.0% |
| I'd probably buy the <u>whole wheat</u> bread | 22.2% | 0.0% | 26.3% | 26.7% | 10.0% |
| I'd be unsure but leaning toward <u>whole wheat</u> bread | 11.1% | 0.0% | 5.3% | 13.3% | 0.0% |
| I'd be unsure but leaning toward <u>enriched white</u> bread | 0.0% | 0.0% | 5.3% | 6.7% | 0.0% |
| I'd probably buy the <u>enriched white</u> bread | 0.0% | 9.1% | 5.3% | 13.3% | 0.0% |
| I'd definitely buy the <u>enriched white</u> bread | 0.0% | 0.0% | 15.8% | 0.0% | 0.0% |

2.2.2 Choices for Whole-Grain Rice

Table 7 shows the distribution of responses when respondents were asked to choose between whole-grain rice and regular enriched rice at different prices.

At the lowest price for whole-grain rice, fifty percent of respondents indicated they would “definitely buy whole-grain” while 40% would lean toward or probably buy the enriched white rice. We find the highest proportions choosing whole-grain rice when it is offered at a 60 cent or 90 cent premium to white rice.

Table 7: Proportion choosing whole-grain rice

| Choice | Price Distribution | | | | |
|---|--------------------|-------|-------|-------|-------|
| | -0.30 | 0 | 0.30 | 0.60 | 0.90 |
| I'd definitely buy the <u>whole grain rice</u> | 50.0% | 21.1% | 7.1% | 30.0% | 33.3% |
| I'd probably buy the <u>whole grain rice</u> | 10.0% | 26.3% | 35.7% | 40.0% | 22.2% |
| I'd be unsure but leaning toward <u>whole grain rice</u> | 0.0% | 10.5% | 7.1% | 0.0% | 11.1% |
| I'd be unsure but leaning toward <u>enriched white rice</u> | 20.0% | 5.3% | 21.4% | 0.0% | 11.1% |
| I'd probably buy the <u>enriched white rice</u> | 20.0% | 21.1% | 14.3% | 20.0% | 11.1% |
| I'd definitely buy the <u>enriched white rice</u> | 0.0% | 15.8% | 14.3% | 10.0% | 11.1% |

2.2.3 Choices for Whole-Grain Pasta

Table 8 summarizes the responses to the question in which respondents chose between regular and whole-grain pasta at different relative prices. As noted above, the proportion choosing the whole-grain product is actually lowest when it is offered at a 30 cent discount. Double the proportion of respondents (40%) indicated they would “*definitely*” choose whole-grain pasta at the 30 cent premium than at the 30 cent discount (20%). The overall pattern of responses suggests that price has an ambiguous or negligible effect on consumers’ choices between whole-grain and conventional grain products.

Table 8: Proportion choosing whole-grain pasta

| Choice | Price Distribution | | | | |
|--|--------------------|-------|-------|-------|-------|
| | -0.30 | 0 | 0.30 | 0.60 | 0.90 |
| I'd definitely buy the <u>whole grain pasta</u> | 20.0% | 40.0% | 40.0% | 33.3% | 18.2% |
| I'd probably buy the <u>whole grain pasta</u> | 20.0% | 13.3% | 0.0% | 33.3% | 18.2% |
| I'd be unsure but leaning toward <u>whole grain pasta</u> | 5.0% | 0.0% | 10.0% | 11.1% | 18.2% |
| I'd be unsure but leaning toward <u>enriched white pasta</u> | 20.0% | 20.0% | 10.0% | 0.0% | 27.3% |
| I'd probably buy the <u>enriched white pasta</u> | 25.0% | 26.7% | 20.0% | 11.1% | 0.0% |
| I'd definitely buy the <u>enriched white pasta</u> | 10.0% | 0.0% | 10.0% | 11.1% | 18.2% |

Chapter 3: Analysis and Results

In the survey respondents were asked to choose between a whole-grain and a regular (i.e., conventional enriched) grain product, and to indicate their response using one of six options ranging from “*definitely whole-grain*” to “*definitely regular*” (see questions 12, 13, 14, Appendix B). Given the ordered nature of the response variable an ordered probit or ordered logit model would be appropriate for the analysis (Greene). However, given the low number of observations and the fact that, ultimately, the actual choice between whole-grain or conventional product rather than the intensity of commitment to that choice is the variable of interest, we chose to analyze the responses using a simple logit model.

The dependent variable in the logit model is qualitative – taking a value of 1 or zero. In this situation we assign a value of 1 to the dependent variable for respondents indicating a preference for the whole-grain product – whether that preference is *definite*, *probable*, or *leaning toward*. Likewise, for respondents indicating a preference for the regular product the dependent variable takes the value of zero.

The logit model assumes that the probability of an individual, i , choosing the whole-grain product (i.e., the probability that the dependent variable takes the value of 1) has the form:

$$P_i = P(Y_i = 1 | X_i) = e^{X_i\beta} / (1 + e^{X_i\beta})$$

where X_i is a the set of explanatory variables which may include product or individual characteristics, and β is the set of unknown parameters. Similarly, the probability of an individual choosing the regular product is

$$1 - P_i = P(Y_i = 0 | X_i) = 1/(1 + e^{X_i\beta})$$

Taking the ratio of the two expressions we get

$$P(Y_i = 1) / P(Y_i = 0) = e^{X_i\beta}$$

Taking the natural log of both sides we get

$$\ln [P_i/(1-P_i)] = X\beta = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \varepsilon_i$$

the parameters of which can be estimated using maximum likelihood.

Unlike a linear model, the logit model guarantees probabilities within the range of (0,1). Thus the estimated probabilities will not be negative nor will they exceed 1, as might occur in a linear model.

Variables expected to influence the respondent's decision to choose the whole-grain product include *price premium*, *information*, *education* and *gender*. *Price Premium* is a variable representing the premium at which the whole-grain product was offered in the choice question, varying from -30 cents to +90 cents. The coefficient on *Price Premium* is expected to be negative, reflecting the fact that as the price of the whole-grain product increases relative to the conventional product, consumers should be less likely to choose the whole-grain product. *Information* is a dummy variable coded as "1" when the respondent received a survey with health information related to whole-grain consumption and "0" otherwise. Including this variable allows us to test the effectiveness of that health information by examining whether it has an effect on respondent's choices. Given the information is favorable to whole-grains, we expect the coefficient on *Information* to be positive.

Education measures the respondent's amount of formal education and is coded "1" for respondents with some high school education, "2" for respondents that

were high school graduates, “3” for respondents with some college education, “4” for respondent that were college graduates, and “5” for respondents with education beyond undergraduate studies. Based on prior findings (USDA, 2005) we expect education to be positively correlated with the probability of choosing whole-grain products. *Gender* is a dummy variable taking on a value of 1 for males included in the model to investigate any possible difference in the likelihood of choosing whole-grain products between males and females. Similarly, *Kids* is a dummy variable representing the presence of children in the household. Based on previous findings (USDA, 2005) the presence of children is expected to have a negative effect on the likelihood of choosing whole-grain products.

Age is a continuous variable measuring the respondent’s age in years. Earlier work (USDA, 2005) suggests that older people are more likely to consume whole-grains and thus *Age* is hypothesized to have a positive sign. The respondent’s Body Mass Index is represented by the variable *BMI* which, in the sample ranges from a low of 18 (underweight) to a high of 55 (morbidly obese). A priori, the correlation between *BMI* and the choice of whole-grain versus conventional could be expected to be either positive or negative. A negative coefficient would indicate that more overweight individuals are less likely to choose whole-grains, while a positive coefficient would indicate the opposite. With more information now being made available about the potential benefits of whole-grains in weight management, overweight individuals attempting to lose weight may be more likely to choose whole-grains.

Prior work (USDA, 2005) also suggests that adults who use labels tend to consume more whole-grains than adults. Our model includes the variable *Label Use* representing the frequency with which the respondent checks food labels for nutrition information. *Label Use* is a categorical variable ranging from 1 (never check the label) to 5 (always check the label).

3.1 Logit Estimation Results

Table 9 presents the estimated coefficients for logit models analyzing respondent choices between whole-grain and regular bread, rice and pasta. Marginal effects are represented by dP/dX and standard errors are in parentheses. Estimation was done using Stata.

Table 9. Logit estimates for Choice of Whole-Grain Bread, Rice, and Pasta

| Variable | Model | | | | | |
|---------------|---------------------------|---------------------------|-------------------------|----------------------------|-------------------|--------------------------|
| | Bread | dP/dX | Rice | dP/dX | Pasta | dP/dX |
| Intercept | -10.996 (6.198) | | -1.815 (4.330) | | -5.468 (3.801) | |
| Price Premium | -0.003 (0.012) | 0.000 (0.000) | 0.001 (0.009) | 0.000 (0.002) | 0.006 (0.007) | 0.002 (0.002) |
| Information | 0.881 (0.957) | 0.085 (0.076) | 0.178 (0.744) | 0.042 (0.174) | 0.903 (0.638) | 0.218 (0.150) |
| Male | 2.098 (1.581) | 0.202 (0.138) | 1.799 (1.189) | 0.332** (0.162) | 1.461 (0.977) | 0.308* (0.163) |
| Education | 1.260** (0.617) | 0.121** (0.057) | 0.674 (0.449) | 0.157 (0.104) | 0.131 (0.363) | 0.032 (0.088) |
| Age | 0.039 (0.038) | 0.003 (0.003) | 0.003 (0.032) | 0.001 (0.007) | 0.032 (0.027) | 0.008 (0.006) |
| BMI | 0.084 (0.092) | 0.008 (0.011) | -0.074 (0.066) | -0.017 (0.015) | 0.058 (0.056) | 0.014 (0.013) |
| Label Use | 0.938** (0.373) | 0.090* (0.048) | 0.578 (0.355) | 0.134* (0.083) | 0.249 (0.311) | 0.060 (0.075) |
| Kids | 0.133 (1.111) | 0.012 (0.025) | -2.005* 1.033 | -0.463** (0.203) | 0.063 (0.831) | 0.015 (0.201) |
| N | 54 | | 53 | | 55 | |

*, **, ***, indicates significance at the 0.1, 0.05, and 0.01 level

Given the low number of observations it is not surprising to find few statistically significant variables in any of the models. In the model investigating the choice between whole-grain and regular bread, the only statistically significant coefficient estimates are those on the *Education* and *Label Use* variables. The *Education* variable was significant at the .05 significance level and has the expected positive sign, implying there is a positive effect of education on the probability of choosing whole-grain bread. The marginal effect of *Education* is also statistically significant and indicates that if education increased by 1 category the likelihood of a consumer choosing whole-grain bread would increase by 12 percent. The *Label Use* variable is also significant at the .05 significance level and the expected positive sign indicates a positive correlation between frequency of checking labels for nutrition information and the probability of choosing whole-grain bread. The marginal effect of *Label Use* is also statistically significant.

The *Label Use* variable also has a statistically significant marginal effect on the likelihood of respondents choosing whole-grain rice. The variable for *Male* gender also has a statistically significant marginal effect indicating that males are 33% more likely than females to choose whole-grain rice. The gender variable is the only statistically significant variable in the pasta model. The rice model is the only one of the three in which the *Kids* variable is significant. The expected negative sign and marginal effect imply that households with children are 46% less likely to choose whole-grain rice compared to households without children.

The *Information* variable was not significant in any of the three models – but in each it had the expected positive sign. The same can be said for the *Age* variable.

Similarly, the *Price Premium* variable was insignificant in all three models – as expected given the discussion of the choice patterns at different prices in the previous chapter. Likewise the variable for *BMI* was insignificant in all three models and its sign varied across models. The lack of a statistically significant effect is not surprising here since either a positive or negative effect could reasonably be expected, but may also simply reflect the low number of observations.

Chapter 4: Summary and Conclusion

This research investigated the impact of socio-demographic variables and the provision of information about health benefits on consumer choices between whole-grain and regular grain products. The analysis is based on data collected from a random sample of households in Topeka, KS using a mail survey. With a relatively small sample size there are few statistically significant results, but some conclusions can be drawn.

Consumer choices between whole-grain and regular wheat products appear in this sample to be surprisingly insensitive to relative prices. For example, all respondents choose whole-grain bread over enriched white bread at both a 30 cent (14%) discount and at a 90 cent (43%) premium. A greater proportion of respondents choose whole-grain rice at a 60 cent or 90 cent premium than at a 30 cent discount. In choosing between whole-grain and regular pasta, the proportion choosing whole-grain increased fairly consistently as its price increased. These findings suggest that consumers view the higher price on the whole-grain product as a signal of higher quality.

Half of our sample received information about the health benefits of whole-grain foods. For each of the three products we examined – bread, rice, and pasta – the provision of that information was associated with a greater likelihood of choosing the whole-grain product. These results were not statistically significant however, but likely would be with a greater sample size.

Among the demographic variables, a higher level of respondent education was consistently related to a higher likelihood of choosing whole-grain product. The

effect however, was statistically significant only in the case of bread. The presence of children in the household was insignificant for bread and pasta, but had a strong negative effect on the likelihood of choosing whole-grain rice over regular rice. Male respondents were more likely to choose whole-grain product and the effect of gender was statistically significant in the case of rice and pasta. Frequent use of food labels was also associated with a higher likelihood of choosing whole-grains, the effect being statistically significant for bread and rice.

Overall, the results are supportive of earlier finding in the literature. We did not find any consistent association between an individual's BMI and the likelihood of choosing whole-grains but given the sample size and the equally plausible possibility for either a negative or a positive effect, that result is not surprising. Additional work with different and larger samples, and samples from different regions would be useful, particularly in an effort to confirm the effectiveness of providing health benefit information about whole grains.

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Appendix A

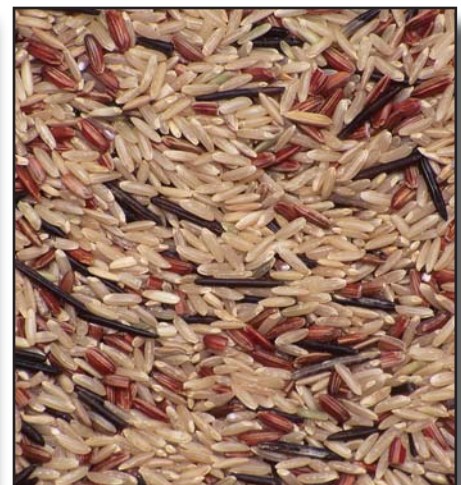
A mail list was created using Microsoft Excel and The Real Yellow Pages for Manhattan, Kansas. In Microsoft Excel formulas were created to generate random numbers, these are the formulas used, =randbetween(1,205) (to find the page in the phone book), =randbetween(1,3) (to select a column on the page in the phone book), =randbetween(1,40) (to determine which person on the page in the column of the phonebook to select). The formulas are this way because there were 205 pgs with phone numbers, there were 3 columns per page and approximately 40 names per column. There were two versions of the questionnaire version 1 contained information related to whole grain products, where version 2 did not contain this health information (each version was administered to 50 people). This was done to find out if consumers would make healthier choices given health information.

The second testing was conducted in Topeka, Kansas 200 people were chosen to receive questionnaires. Similar methods used in the first test to create sample population were used in the second survey distribution.



Grain Foods Consumption Survey

Department of Agricultural Economics
KANSAS STATE UNIVERSITY



To be completed by the person most responsible for purchasing food in your household.

We are interested in your perceptions and opinions about the health benefits of various foods we eat. This survey is in multiple-choice and fill-in-the-blank format and will take approximately 8 or 10 minutes to complete. Please return it in the enclosed postage paid envelope.

1. When you are purchasing food products, how often do you check the label for each of the following pieces of information? *circle answers*

| | Never | | Sometimes | | Always |
|----------------------------|-------|---|-----------|---|--------|
| Nutrition | 1 | 2 | 3 | 4 | 5 |
| Country of origin | 1 | 2 | 3 | 4 | 5 |
| Ingredients | 1 | 2 | 3 | 4 | 5 |
| Expiration or Sell-by date | 1 | 2 | 3 | 4 | 5 |

2. Approximately how often does your household consume **pasta**? *Mark one answer.*

| | |
|-------------------------|----------------------------------|
| _____ every day | _____ less than once per week |
| _____ 3 to 4 times/week | _____ never, we do not eat pasta |
| _____ 1 to 2 times/week | |

3. Approximately how often does your household consume **rice**? *Mark one answer.*

| | |
|-------------------------|---------------------------------|
| _____ every day | _____ less than once per week |
| _____ 3 to 4 times/week | _____ never, we do not eat rice |
| _____ 1 to 2 times/week | |

4. Approximately how often does your household consume **bread**? *Mark one answer.*

| | |
|-------------------------|----------------------------------|
| _____ every day | _____ less than once per week |
| _____ 3 to 4 times/week | _____ never, we do not eat bread |
| _____ 1 to 2 times/week | |

5. How often does the **nutritional value** influence your decision when purchasing the following products?

| | Never | | Sometimes | | Always |
|-------|-------|---|-----------|---|--------|
| Bread | 1 | 2 | 3 | 4 | 5 |
| Rice | 1 | 2 | 3 | 4 | 5 |
| Pasta | 1 | 2 | 3 | 4 | 5 |

6. How often does **price** influence your decision when purchasing the following products?

| | Never | | Sometimes | | Always |
|-------|-------|---|-----------|---|--------|
| Bread | 1 | 2 | 3 | 4 | 5 |
| Rice | 1 | 2 | 3 | 4 | 5 |
| Pasta | 1 | 2 | 3 | 4 | 5 |

7. How often does **taste** influence your decision when purchasing the following products?

| | Never | | Sometimes | | Always |
|-------|-------|---|-----------|---|--------|
| Bread | 1 | 2 | 3 | 4 | 5 |
| Rice | 1 | 2 | 3 | 4 | 5 |
| Pasta | 1 | 2 | 3 | 4 | 5 |

8. What price do you normally pay for a loaf of bread? *Please mark only one answer.*

| | |
|----------------------------|--|
| _____ about \$1.00 or less | _____ about \$2.50 |
| _____ about \$1.50 | _____ about \$3.00 or more |
| _____ about \$2.00 | _____ I don't remember what I normally pay |

Whole Grain Products and Enriched Grain Products

Whole grain products are made with the whole kernel of grain. The grain kernel has three components: bran, endosperm and germ. The bran (outer layer) contains the largest amount of fiber, the endosperm (middle layer) contains mostly protein and carbohydrates, and the germ (inner part) is a rich source of trace minerals, B vitamins, and antioxidants. Whole grain products include whole wheat bread, brown rice, and whole wheat pasta.

White flour and white rice are made only from the endosperm of the grain kernel. White bread and pasta products and white rice are typically **enriched** through the addition of minerals and vitamins.

Health Benefits of Whole Grain Foods

While enriched grain products are a good source of iron and B vitamins such as thiamine, niacin, riboflavin and folic acid, consumption of **whole grain products** has been linked to numerous health benefits. These benefits include reduced risk of heart disease, cancer and diabetes. Evidence also suggests that whole grain foods may contribute to achieving and maintaining a healthy weight.

9. When you do your food shopping, how often do you look for whole grain versions of the following products?

| | Never | | Sometimes | | Always |
|-------|-------|---|-----------|---|--------|
| Bread | 1 | 2 | 3 | 4 | 5 |
| Rice | 1 | 2 | 3 | 4 | 5 |
| Pasta | 1 | 2 | 3 | 4 | 5 |

10. Which of the following best describes your knowledge of whole grain foods before receiving this survey?

Please mark only one answer.

| |
|---|
| _____ I had never heard of whole grain foods until now |
| _____ I had heard of whole grain foods, but did not know much about them. |
| _____ I knew quite a lot about whole grain foods. |

11. From what sources have you received most of your information about whole grain foods?

Please mark all that apply.

| | | |
|----------------------------|----------------------|---------------------------------|
| _____ Newspaper/Magazines | _____ Radio/TV | _____ Family/Friends/Colleagues |
| _____ School/Workplace | _____ Internet | _____ Health Care Provider |
| _____ In-store information | _____ Product labels | _____ Other |

The questions on the following pages will ask about which product you would be most likely to choose – a whole grain product or an enriched product – in a shopping situation. Please try to answer the question as if you were making the choice while shopping in your local supermarket.

12. Your choices when buying bread:

12a) If you were purchasing **one loaf of bread** at your local supermarket and you could choose between whole wheat bread (at \$2.09 for a 20 ounce loaf) and the same brand of enriched white bread (**also at \$2.09** for a 20 ounce loaf), which type of bread would you buy?

Please mark only one of the six answers.



- | | | | |
|--------------------------|---|---|--------------------|
| <input type="checkbox"/> | I'd definitely buy the whole wheat bread | } | Go to Question 12b |
| <input type="checkbox"/> | I'd probably buy the whole wheat bread | | |
| <input type="checkbox"/> | I'd be unsure but leaning toward whole wheat bread | | |
| <input type="checkbox"/> | I'd definitely buy the enriched white bread | } | Go to Question 12c |
| <input type="checkbox"/> | I'd probably buy the enriched white bread | | |
| <input type="checkbox"/> | I'd be unsure but leaning toward enriched white bread | | |

12b) If you chose **whole wheat** bread in question 12a, would you still buy whole wheat bread if it cost 20¢ per loaf **more** (i.e. \$2.29/loaf) than enriched white bread? *Please mark only one answer.*

- ☐ Yes, if whole wheat bread cost 20¢/loaf more than enriched white bread, I'd still buy whole wheat bread.
- ☐ No, if whole wheat bread cost 20¢/loaf more than enriched white bread, I'd choose to buy enriched white bread instead.

12c) If you chose **enriched white** bread in question 12a, would you still buy enriched white bread if it cost 20¢ per loaf **more** (i.e. \$2.29/loaf) than whole wheat bread? *Please mark only one answer.*

- ☐ Yes, if enriched white bread cost 20¢/loaf more than whole wheat bread, I'd still buy enriched white bread.
- ☐ No, if enriched white bread cost 20¢/loaf more than whole wheat bread, I'd choose to buy whole wheat bread instead.
-

13. Your choices when buying rice:

13a) If you were purchasing a **single 2 lb (32 ounce) bag of rice** at your local supermarket and you could choose between whole grain rice (at \$1.79 for a 2 lb bag) and the same brand of enriched white rice (**also at \$1.79** for a 2 lb bag), which type of rice would you buy?

Please mark only one of the six answers.



- | | | |
|---|---|--------------------|
| <input type="checkbox"/> I'd definitely buy the whole grain rice | } | Go to Question 13b |
| <input type="checkbox"/> I'd probably buy the whole grain rice | | |
| <input type="checkbox"/> I'd be unsure but leaning toward whole grain rice | | |
| <input type="checkbox"/> I'd definitely buy the enriched white rice | } | Go to Question 13c |
| <input type="checkbox"/> I'd probably buy the enriched white rice | | |
| <input type="checkbox"/> I'd be unsure but leaning toward enriched white rice | | |

13b) If you chose **whole grain** rice in question 13a, would you still buy whole grain rice if it cost 40¢ per bag **more** (i.e. \$2.19/bag) than enriched white rice? *Please mark only one answer*

- ☐ Yes, if whole grain rice cost 40¢/bag more than enriched white rice, I'd still buy whole grain rice.
- ☐ No, if whole grain rice cost 40¢/bag more than enriched white rice, I'd choose to buy enriched white rice instead.

13c) If you chose **enriched white** rice in question 13a, would you still buy enriched white rice if it cost 40¢ per bag **more** (i.e. \$2.19/bag) than whole grain rice? *Please mark only one answer*

- ☐ Yes, if enriched white rice cost 40¢/bag more than whole grain rice, I'd still buy enriched white rice.
- ☐ No, if enriched white rice cost 40¢/bag more than whole grain rice, I'd choose to buy whole grain rice instead.
-

14. Your choices when buying pasta:

14a) If you were purchasing a **single 1 lb (16 ounce) package of pasta** at your local supermarket and you could choose between whole grain pasta (at \$1.49 for a 1 lb package) and the same brand of regular enriched pasta (**also at \$1.49** for a 1 lb package), which type of pasta would you buy?

Please mark only one of the six answers.



- _____ I'd definitely buy the whole grain pasta
- _____ I'd probably buy the whole grain pasta
- _____ I'd be unsure but leaning toward whole grain pasta



Go to Question 14b

- _____ I'd definitely buy the regular enriched pasta
- _____ I'd probably buy the regular enriched pasta
- _____ I'd be unsure but leaning toward regular enriched pasta



Go to Question 14c

14b) If you chose **whole grain** pasta in question 14a, would you still buy whole grain pasta if it cost 60¢ per package **more** (i.e. \$2.09/package) than regular enriched pasta? *Please mark only one answer.*

- _____ Yes, if whole grain pasta cost 60¢/package more than enriched pasta, I'd still buy whole grain pasta.
- _____ No, if whole grain pasta cost 60¢/package more than enriched pasta, I'd choose to buy regular enriched white pasta instead.

14c) If you chose **regular enriched** pasta in question 14a, would you still buy regular enriched pasta if it cost 60¢ per package **more** (i.e. \$2.09/package) than whole grain pasta? *Please mark only one answer.*

- _____ Yes, if regular enriched pasta cost 60¢/package more than whole grain pasta, I'd still buy regular enriched pasta.
 - _____ No, if regular enriched pasta cost 60¢/package more than whole grain pasta, I'd choose to buy whole grain pasta instead.
-

15. Considering the choices you made in questions 12, 13, and 14, how important were the following factors in influencing your decisions?

| | Not important | | Somewhat important | | Very Important |
|-------------------------------------|---------------|---|--------------------|---|----------------|
| Preparation convenience | 1 | 2 | 3 | 4 | 5 |
| Nutrition | 1 | 2 | 3 | 4 | 5 |
| What my children prefer | 1 | 2 | 3 | 4 | 5 |
| Taste/Flavor | 1 | 2 | 3 | 4 | 5 |
| Price | 1 | 2 | 3 | 4 | 5 |
| Familiarity | 1 | 2 | 3 | 4 | 5 |
| Preference for less processed foods | 1 | 2 | 3 | 4 | 5 |
| Health reasons | 1 | 2 | 3 | 4 | 5 |

16. a) Before receiving this survey, how would you have described your attitude toward whole grain foods? *Please circle one number.*

| Very Negative | | Neutral | | Very Positive |
|---------------|---|---------|---|---------------|
| 1 | 2 | 3 | 4 | 5 |

b) After reading the information provided in this survey, how would you now describe your attitude toward whole grain foods? *Please circle one number.*

| Very Negative | | Neutral | | Very Positive |
|---------------|---|---------|---|---------------|
| 1 | 2 | 3 | 4 | 5 |

Caloric Intake

Nutritionists recommend average daily caloric intakes that range from 1,600 calories/day for many sedentary women and older adults and up to 2,800 calories/day for teenage boys and active men.

17. About how many calories do you think are in a McDonald's Big Mac? *Please mark only one response.*

| | | |
|-------------------|------------|----------------------|
| _____ 100 or less | _____ 350 | _____ 600 |
| _____ 850 | _____ 1100 | _____ more than 1100 |

18. About how many calories do you think are in an average 12 ounce can of regular soda? *Please mark only one response.*

| | | |
|--------------------|-----------|---------------------|
| _____ less than 50 | _____ 100 | _____ 150 |
| _____ 200 | _____ 250 | _____ more than 250 |

In this part of the survey, we would like some background information about you. We would like to remind you that all of this information will be treated as confidential, and that the results of this survey will only be used in summary form.

19. What is your gender? ☐ Male ☐ Female

20. Are you pregnant or nursing? ☐ Yes ☐ No

21. In what year were you born? _____

22. Approximately what are your height and weight?

Height: _____ feet _____ inches Weight: _____ pounds

23. a) Are you currently at or very close to what you would consider your ideal weight?

☐ Yes ☐ No

If your response to part 'a,' is Yes skip part 'b.'

b.) Relative to your ideal weight, do you think you are currently....*circle one*

i. Below ideal weight by about: 5lbs 10lbs 15lbs 20lbs 25lbs or more

ii. Above ideal weight by about: 5lbs 10lbs 15lbs 20lbs 25lbs 30lbs 40lbs 50lbs or more

24. On average, how many times do you eat out each week? *Please choose only one answer.*

_____ Hardly ever _____ 1-3 times each week
_____ 4-6 times each week _____ 7 or more times each week

25. On average, how many times per week do you exercise? *Please choose only one response.*

_____ Hardly ever _____ 1-3 times a week
_____ 4-6 times per week _____ 7 or more times each week

26. What is the highest level of education you have completed? *Please mark only one response.*

_____ Some high school _____ College graduate
_____ High school graduate _____ Post graduate
_____ Some college

27. In order to evaluate if we are getting a representative cross section in our sample, we would like to know your approximate 2006 household income before taxes. (Please mark only one response.)

- | | |
|--|--|
| <input type="checkbox"/> Less than \$20,000 | <input type="checkbox"/> \$50,000 up to \$70,000 |
| <input type="checkbox"/> \$20,000 up to \$30,000 | <input type="checkbox"/> \$70,000 up to \$100,000 |
| <input type="checkbox"/> \$30,000 up to \$40,000 | <input type="checkbox"/> \$100,000 up to \$150,000 |
| <input type="checkbox"/> \$40,000 up to \$50,000 | <input type="checkbox"/> more than \$150,000 |

28. Including yourself, how many people live in your household?

People

29. Are there any children living in your household? *Please circle answers.*

- a) under age 6? ☐ Yes ☐ No
- b) between 6 and 18? ☐ Yes ☐ No

30. What is your marital status? *Please mark only one response.*

- | | |
|---|--|
| <input type="checkbox"/> Single | <input type="checkbox"/> Divorced |
| <input type="checkbox"/> Married | <input type="checkbox"/> Spouse Deceased |
| <input type="checkbox"/> Have partner (unmarried) | |

If you have additional comments or concerns about whole grain products or about this survey please use the space below to express them.

Your contribution to this project is greatly appreciated. Please check the survey to ensure that you have answered all of the questions. We have provided a postage paid envelope for you to return the completed survey. If you would like a copy of the results of this survey, please enclose a business card or a separate sheet of paper with your name and complete mailing address.

Appendix C:Pretest Results

Department of Agricultural Economics
Kansas State University

2/7/2008

Mail survey results on consumer preferences sent to Manhattan, KS February 2008.

Grain Foods Consumption Survey

Kansas State University Department of Agricultural Economics

We are interested in your perceptions and opinions about the health benefits of various foods we eat. This survey is in multiple-choice and fill-in-the-blank format and will take approximately 8 or 10 minutes to complete. Please return it in the enclosed postage paid envelope.

1a) When you are purchasing food products, how often do you check the label for **Nutrition** information?

| Choice | <u>Overall</u> | | <u>Ver1 (with health info)</u> | | <u>Ver2 (w/out health info)</u> | |
|----------------|----------------|------------|--------------------------------|------------|---------------------------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 2 | 5.26% | 2 | 9.52% | 0 | 0.00% |
| 2 | 2 | 5.26% | 1 | 4.76% | 1 | 5.88% |
| Sometimes 3 | 14 | 36.84% | 6 | 28.57% | 8 | 47.06% |
| 4 | 14 | 36.84% | 10 | 47.62% | 4 | 23.53% |
| Always 5 | 6 | 15.79% | 2 | 9.52% | 4 | 23.53% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

1b) When you are purchasing food products, how often do you check the label for **Country of Origin** information?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 17 | 44.74% | 12 | 57.14% | 5 | 29.41% |
| 2 | 13 | 34.21% | 6 | 28.57% | 7 | 41.18% |
| Sometimes 3 | 5 | 13.16% | 2 | 9.52% | 3 | 17.65% |
| 4 | 2 | 5.26% | 1 | 4.76% | 1 | 5.88% |
| Always 5 | 1 | 2.63% | 0 | 0.00% | 1 | 5.88% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

1c) When you are purchasing food products, how often do you check the label for **Ingredients** information?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 4 | 10.53% | 4 | 19.05% | 0 | 0.00% |
| 2 | 3 | 7.89% | 0 | 0.00% | 3 | 17.65% |
| Sometimes 3 | 15 | 39.47% | 9 | 42.86% | 6 | 35.29% |
| 4 | 9 | 23.68% | 6 | 28.57% | 3 | 17.65% |
| Always 5 | 7 | 18.42% | 2 | 9.52% | 5 | 29.41% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

1d) When you are purchasing food products, how often do you check the label for **Expiration or Sell-by date** information?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Never 1 | 4 | 10.53% | 3 | 14.29% | 1 | 5.88% |
| 2 | 2 | 5.26% | 1 | 4.76% | 1 | 5.88% |
| Sometimes 3 | 6 | 15.79% | 1 | 4.76% | 5 | 29.41% |
| 4 | 12 | 31.58% | 8 | 38.10% | 4 | 23.53% |
| Always 5 | 14 | 36.84% | 8 | 38.10% | 6 | 35.29% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

2. Approximately how often does your household consume **pasta**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------------------|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| every day | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| 3 to 4 times/week | 5 | 13.16% | 3 | 14.29% | 2 | 11.76% |
| 1 to 2 times/week | 15 | 39.47% | 7 | 33.33% | 8 | 47.06% |
| less than once per week | 18 | 47.37% | 11 | 52.38% | 7 | 41.18% |
| never, we do not eat pasta | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

3. Approximately how often does your household consume rice?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---------------------------|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| every day | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| 3 to 4 times/week | 1 | 2.63% | 1 | 4.76% | 0 | 0.00% |
| 1 to 2 times/week | 15 | 39.47% | 8 | 38.10% | 7 | 41.18% |
| less than once per week | 21 | 55.26% | 11 | 52.38% | 10 | 58.82% |
| never, we do not eat rice | 1 | 2.63% | 1 | 4.76% | 0 | 0.00% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

4. Approximately how often does your household consume bread?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------------------|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| every day | 22 | 57.89% | 11 | 52.38% | 11 | 64.71% |
| 3 to 4 times/week | 12 | 31.58% | 7 | 33.33% | 5 | 29.41% |
| 1 to 2 times/week | 3 | 7.89% | 2 | 9.52% | 1 | 5.88% |
| less than once per week | 1 | 2.63% | 1 | 4.76% | 0 | 0.00% |
| never, we do not eat bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

5a) How often does the nutritional value influence your decision when purchasing Bread?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 2 | 5.26% | 2 | 9.52% | 0 | 0.00% |
| 2 | 3 | 7.89% | 1 | 4.76% | 2 | 11.76% |
| Sometimes 3 | 6 | 15.79% | 5 | 23.81% | 1 | 5.88% |
| 4 | 17 | 44.74% | 10 | 47.62% | 7 | 41.18% |
| Always 5 | 10 | 26.32% | 3 | 14.29% | 7 | 41.18% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

5b) How often does the nutritional value influence your decision when purchasing **Rice**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 9 | 23.68% | 5 | 13.16% | 4 | 23.53% |
| 2 | 8 | 21.05% | 5 | 13.16% | 3 | 17.65% |
| Sometimes 3 | 10 | 26.32% | 5 | 13.16% | 5 | 29.41% |
| 4 | 7 | 18.42% | 4 | 10.53% | 3 | 17.65% |
| Always 5 | 4 | 10.53% | 2 | 5.26% | 2 | 11.76% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

5c) How often does the nutritional value influence your decision when purchasing **Pasta**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 9 | 23.68% | 4 | 19.05% | 5 | 29.41% |
| 2 | 5 | 13.16% | 5 | 23.81% | 0 | 0.00% |
| Sometimes 3 | 10 | 26.32% | 5 | 23.81% | 5 | 29.41% |
| 4 | 10 | 26.32% | 5 | 23.81% | 5 | 29.41% |
| Always 5 | 4 | 10.53% | 2 | 9.52% | 2 | 11.76% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

6a) How often does price influence your decision when purchasing **Bread**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 6 | 15.79% | 4 | 19.05% | 2 | 11.76% |
| 2 | 6 | 15.79% | 3 | 14.29% | 3 | 17.65% |
| Sometimes 3 | 12 | 31.58% | 7 | 33.33% | 5 | 29.41% |
| 4 | 11 | 28.95% | 6 | 28.57% | 5 | 29.41% |
| Always 5 | 3 | 7.89% | 1 | 4.76% | 2 | 11.76% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

6b) How often does price influence your decision when purchasing **Rice**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 10 | 26.32% | 7 | 33.33% | 3 | 17.65% |
| 2 | 6 | 15.79% | 3 | 14.29% | 3 | 17.65% |
| Sometimes 3 | 14 | 36.84% | 8 | 38.10% | 6 | 35.29% |
| 4 | 3 | 7.89% | 2 | 9.52% | 1 | 5.88% |
| Always 5 | 5 | 13.16% | 1 | 4.76% | 4 | 23.53% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

6c) How often does price influence your decision when purchasing **Pasta**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 9 | 23.68% | 6 | 28.57% | 3 | 17.65% |
| 2 | 3 | 7.89% | 2 | 9.52% | 1 | 5.88% |
| Sometimes 3 | 17 | 44.74% | 9 | 42.86% | 8 | 47.06% |
| 4 | 4 | 10.53% | 3 | 14.29% | 1 | 5.88% |
| Always 5 | 5 | 13.16% | 1 | 4.76% | 4 | 23.53% |
| Total | 38 | | 21 | | 17 | |
| Average | | | | | | |

7a) How often does taste influence your decision when purchasing **Bread**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 1 | 2.56% | 1 | 4.55% | 0 | 0.00% |
| 2 | 1 | 2.56% | 1 | 4.55% | 0 | 0.00% |
| Sometimes 3 | 3 | 7.69% | 2 | 9.09% | 1 | 5.88% |
| 4 | 16 | 41.03% | 11 | 50.00% | 5 | 29.41% |
| Always 5 | 18 | 46.15% | 7 | 31.82% | 11 | 64.71% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

7b) How often does taste influence your decision when purchasing **Rice**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 5 | 12.82% | 3 | 13.64% | 2 | 11.76% |
| 2 | 7 | 17.95% | 6 | 27.27% | 1 | 5.88% |
| Sometimes 3 | 6 | 15.38% | 4 | 18.18% | 2 | 11.76% |
| 4 | 12 | 30.77% | 5 | 22.73% | 7 | 41.18% |
| Always 5 | 9 | 23.08% | 4 | 18.18% | 5 | 29.41% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

7c) How often does taste influence your decision when purchasing **Pasta**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 4 | 10.26% | 2 | 9.09% | 2 | 11.76% |
| 2 | 5 | 12.82% | 4 | 18.18% | 1 | 5.88% |
| Sometimes 3 | 7 | 17.95% | 5 | 22.73% | 2 | 11.76% |
| 4 | 14 | 35.90% | 7 | 31.82% | 7 | 41.18% |
| Always 5 | 9 | 23.08% | 4 | 18.18% | 5 | 29.41% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

8. What price do you normally pay for a loaf of bread?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--------------------------------------|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| about \$1.00 or less | 1 | 2.56% | 0 | 0.00% | 1 | 5.88% |
| about \$1.50 | 10 | 25.64% | 7 | 31.82% | 3 | 17.65% |
| about \$2.00 | 11 | 28.21% | 6 | 27.27% | 5 | 29.41% |
| about \$2.50 | 11 | 28.21% | 5 | 22.73% | 6 | 35.29% |
| about \$3.00 or more | 3 | 7.69% | 2 | 9.09% | 1 | 5.88% |
| I don't remember what I normally pay | 3 | 7.69% | 2 | 9.09% | 1 | 5.88% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

Whole Grain Products and Enriched Grain Products

Whole grain products are made with the whole kernel of grain. The grain kernel has three components: bran, endosperm and germ. The bran (outer layer) contains the largest amount of fiber, the endosperm (middle layer) contains mostly protein and carbohydrates, and the germ (inner part) is a rich source of trace minerals, B vitamins, and antioxidants. Whole grain products include whole wheat bread, brown rice, and whole wheat pasta.

White flour and white rice are made only from the endosperm of the grain kernel. White bread and pasta products and white rice are typically **enriched** through the addition of minerals and vitamins.

Health Benefits of Whole Grain Foods (*version 1 only*)

While enriched grain products are a good source of iron and B vitamins such as thiamine, niacin, riboflavin and folic acid, consumption of **whole grain products** has been linked to numerous health benefits. These benefits include reduced risk of heart disease, cancer and diabetes. Evidence also suggests that whole grain foods may contribute to achieving and maintaining a healthy weight.

9a) When you do your food shopping, how often do you look for whole grain versions of **Bread?**

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 1 | 2.56% | 1 | 4.55% | 0 | 0.00% |
| 2 | 1 | 2.56% | 1 | 4.55% | 0 | 0.00% |
| Sometimes 3 | 7 | 17.95% | 5 | 22.73% | 2 | 11.76% |
| 4 | 10 | 25.64% | 6 | 27.27% | 4 | 23.53% |
| Always 5 | 20 | 51.28% | 9 | 40.91% | 11 | 64.71% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

9b) When you do your food shopping, how often do you look for whole grain versions of **Rice?**

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 9 | 23.08% | 4 | 18.18% | 5 | 29.41% |
| 2 | 7 | 17.95% | 5 | 22.73% | 2 | 11.76% |
| Sometimes 3 | 9 | 23.08% | 6 | 27.27% | 3 | 17.65% |
| 4 | 7 | 17.95% | 5 | 22.73% | 2 | 11.76% |
| Always 5 | 7 | 17.95% | 2 | 9.09% | 5 | 29.41% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

9c) When you do your food shopping, how often do you look for whole grain versions of Pasta?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 14 | 35.90% | 7 | 31.82% | 7 | 41.18% |
| 2 | 3 | 7.69% | 1 | 4.55% | 2 | 11.76% |
| Sometimes 3 | 9 | 23.08% | 8 | 36.36% | 1 | 5.88% |
| 4 | 5 | 12.82% | 3 | 13.64% | 2 | 11.76% |
| Always 5 | 8 | 20.51% | 3 | 13.64% | 5 | 29.41% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

10. Which of the following best describes your knowledge of whole grain foods before receiving this survey?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I had never heard of whole grain foods until now | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I had heard of whole grain foods, but did not know much about them. | 16 | 41.03% | 11 | 50.00% | 5 | 29.41% |
| I knew quite a lot about whole grain foods. | 23 | 58.97% | 11 | 50.00% | 12 | 70.59% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

11. From what sources have you received most of your information about whole grain foods? (Please mark all that apply.)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---------------------------|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Newspaper/Magazines | 17 | 45.95% | 9 | 40.91% | 8 | 53.33% |
| School/Workplace | 11 | 29.73% | 5 | 22.73% | 6 | 40.00% |
| In-store information | 9 | 24.32% | 5 | 22.73% | 4 | 26.67% |
| Radio/TV | 11 | 29.73% | 10 | 45.45% | 1 | 6.67% |
| Internet | 5 | 13.51% | 4 | 18.18% | 1 | 6.67% |
| Product labels | 22 | 59.46% | 13 | 59.09% | 9 | 60.00% |
| Family/Friends/Colleagues | 12 | 32.43% | 6 | 27.27% | 6 | 40.00% |
| Health Care Provider | 8 | 21.62% | 5 | 22.73% | 3 | 20.00% |
| Other | 5 | 13.51% | 3 | 13.64% | 2 | 13.33% |
| Total Respondents | 37 | | 22 | | 15 | |
| Average | | | | | | |

The questions on the following pages will ask about which product you would be most likely to choose – a whole grain product or an enriched product – in a shopping situation. Please try to answer the question as if you were making the choice while shopping in your local supermarket.

Your choices when buying bread:

12a) If you were purchasing one loaf of bread at your local supermarket and you could choose between whole wheat bread (at \$2.09 for a 12oz loaf) and the same brand of enriched white bread (also at \$2.09 for a 12oz loaf), which type of bread would you buy?
(Please mark only one answer)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole wheat</u> bread | 25 | 64.10% | 11 | 50.00% | 14 | 82.35% |
| I'd probably buy the <u>whole wheat</u> bread | 5 | 12.82% | 4 | 18.18% | 1 | 5.88% |
| I'd be unsure but leaning toward <u>whole wheat</u> bread | 2 | 5.13% | 2 | 9.09% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd probably buy the <u>enriched white</u> bread | 5 | 12.82% | 3 | 13.64% | 2 | 11.76% |
| I'd definitely buy the <u>enriched white</u> bread | 2 | 5.13% | 2 | 9.09% | 0 | 0.00% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

12b) If you chose whole wheat bread in question 12a, would you still buy whole wheat bread if it cost 20¢ per loaf more (i.e. \$2.29/loaf) than enriched white bread? (Please mark only one answer)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Yes, if <u>whole wheat</u> bread cost 20¢/loaf more than enriched white bread | 32 | 100.00% | 17 | 100.00% | 15 | 100.00% |
| No, if <u>whole wheat</u> bread cost 20¢/loaf more than enriched white bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 32 | | 17 | | 15 | |
| Average | | | | | | |

12c) If you chose enriched white bread in question 12a, would you still buy enriched white bread if it cost 20¢ per loaf more (i.e. \$2.29/loaf) than whole wheat bread? (Please mark only one answer)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Yes, if <u>enriched white bread</u> cost 20¢/loaf more than whole wheat bread | 4 | 66.67% | 2 | 50.00% | 2 | 100.00% |
| No, if <u>enriched white bread</u> cost 20¢/loaf more than whole wheat bread | 2 | 33.33% | 2 | 50.00% | 0 | 0.00% |
| Total | 6 | | 4 | | 2 | |
| Average | | | | | | |

Your choices when buying rice:

13a) If you were purchasing a single 2 lb (32 ounce) bag of rice at your local supermarket and you could choose between whole grain rice (at \$1.79 for a 2 lb bag) and the same brand of enriched white rice (also at \$1.79 for a 2 lb bag), which type of rice would you buy?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain rice</u> | 13 | 35.14% | 6 | 30.00% | 7 | 41.18% |
| I'd probably buy the <u>whole grain rice</u> | 7 | 18.92% | 4 | 20.00% | 3 | 17.65% |
| I'd be unsure but leaning toward <u>whole grain rice</u> | 4 | 10.81% | 3 | 15.00% | 1 | 5.88% |
| I'd be unsure but leaning toward <u>enriched white rice</u> | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd probably buy the <u>enriched white rice</u> | 8 | 21.62% | 4 | 20.00% | 4 | 23.53% |
| I'd definitely buy the <u>enriched white rice</u> | 5 | 13.51% | 3 | 15.00% | 2 | 11.76% |
| Total | 37 | | 20 | | 17 | |
| Average | | | | | | |

13b) If you chose whole grain rice in question 13a, would you still buy whole grain rice if it cost 40¢ per bag more (i.e. \$2.19/bag) than enriched white rice?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Yes, if <u>whole grain rice</u> cost 40¢/bag more than enriched white rice | 21 | 87.50% | 11 | 84.62% | 10 | 90.91% |
| No, if <u>whole grain rice</u> cost 40¢/bag more than enriched white rice | 3 | 12.50% | 2 | 15.38% | 1 | 9.09% |
| Total | 24 | | 13 | | 11 | |
| Average | | | | | | |

13c) If you chose enriched white rice in question 13a, would you still buy enriched white rice if it cost 40¢ per bag more (i.e. \$2.19/bag) than whole grain rice ?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Yes, if <u>enriched white rice</u> cost 40¢/bag more than whole grain rice | 9 | 69.23% | 5 | 71.43% | 4 | 66.67% |
| No, if <u>enriched white rice</u> cost 40¢/bag more than whole grain rice | 4 | 30.77% | 2 | 28.57% | 2 | 33.33% |
| Total | 13 | | 7 | | 6 | |
| Average | | | | | | |

Your choices when buying pasta:

14a) If you were purchasing a single 1 lb (16 ounce) package of pasta at your local supermarket and you could choose between whole grain pasta (at \$1.49 for a 1 lb package) and the same brand of enriched white, which type of pasta would you buy?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain pasta</u> | 12 | 32.43% | 5 | 25.00% | 7 | 41.18% |
| I'd probably buy the <u>whole grain pasta</u> | 5 | 13.51% | 4 | 20.00% | 1 | 5.88% |
| I'd be unsure but leaning toward <u>whole grain pasta</u> | 4 | 10.81% | 3 | 15.00% | 1 | 5.88% |
| I'd be unsure but leaning toward <u>enriched white pasta</u> | 1 | 2.70% | 0 | 0.00% | 1 | 5.88% |
| I'd probably buy the <u>enriched white pasta</u> | 11 | 29.73% | 6 | 30.00% | 5 | 29.41% |
| I'd definitely buy the <u>enriched white pasta</u> | 4 | 10.81% | 2 | 10.00% | 2 | 11.76% |
| Total | 37 | | 20 | | 17 | |
| Average | | | | | | |

14b) If you chose whole grain pasta in question 14a, would you still buy whole grain pasta if it cost 60¢ per package more (i.e. \$2.09/package) than enriched white pasta?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Yes, if <u>whole grain pasta</u> cost 60¢/package more than enriched white pasta | 15 | 71.43% | 10 | 83.33% | 5 | 55.56% |
| No, if <u>whole grain pasta</u> cost 60¢/package more than enriched white pasta | 6 | 28.57% | 2 | 16.67% | 4 | 44.44% |
| Total | 21 | | 12 | | 9 | |
| Average | | | | | | |

14c) If you chose enriched white pasta in question 14a, would you still buy enriched white pasta if it cost 60¢ per package more (i.e. \$2.09/package) than whole grain pasta ?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Yes, if <u>enriched white pasta</u> cost 60¢/package more than whole grain pasta | 9 | 56.25% | 3 | 37.50% | 6 | 75.00% |
| No, if <u>enriched white pasta</u> cost 60¢/package more than whole grain pasta | 7 | 43.75% | 5 | 62.50% | 2 | 25.00% |
| Total | 16 | | 8 | | 8 | |
| Average | | | | | | |

15a) Considering the choices you made in questions 12, 13, and 14, how influential was **Preparation convenience** in your decisions?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 2 | 5.13% | 1 | 4.55% | 1 | 5.88% |
| 2 | 7 | 17.95% | 4 | 18.18% | 3 | 17.65% |
| Somewhat Imp 3 | 18 | 46.15% | 11 | 50.00% | 7 | 41.18% |
| 4 | 6 | 15.38% | 3 | 13.64% | 3 | 17.65% |
| Very Important 5 | 6 | 15.38% | 3 | 13.64% | 3 | 17.65% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

15b) Considering the choices you made in questions 12, 13, and 14, how influential was **Nutrition** in your decisions?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 2 | 5.13% | 2 | 9.09% | 0 | 0.00% |
| 2 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Somewhat Imp 3 | 8 | 20.51% | 5 | 22.73% | 3 | 17.65% |
| 4 | 19 | 48.72% | 9 | 40.91% | 10 | 58.82% |
| Very Important 5 | 10 | 25.64% | 6 | 27.27% | 4 | 23.53% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

15c) Considering the choices you made in questions 12, 13, and 14, how influential was **What my children prefer** in your decisions?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 9 | 27.27% | 4 | 21.05% | 5 | 35.71% |
| 2 | 4 | 12.12% | 4 | 21.05% | 0 | 0.00% |
| Somewhat Imp 3 | 3 | 9.09% | 2 | 10.53% | 1 | 7.14% |
| 4 | 10 | 30.30% | 6 | 31.58% | 4 | 28.57% |
| Very Important 5 | 7 | 21.21% | 3 | 15.79% | 4 | 28.57% |
| Total | 33 | | 19 | | 14 | |
| Average | | | | | | |

15d) Considering the choices you made in questions 12, 13, and 14, how influential was **Taste/Flavor** in your decisions?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| 2 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Somewhat Imp 3 | 5 | 12.82% | 4 | 18.18% | 1 | 5.88% |
| 4 | 15 | 38.46% | 8 | 36.36% | 7 | 41.18% |
| Very Important 5 | 19 | 48.72% | 10 | 45.45% | 9 | 52.94% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

15e) Considering the choices you made in questions 12, 13, and 14, how influential was **Price** in your decisions?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 4 | 10.26% | 0 | 0.00% | 4 | 23.53% |
| 2 | 7 | 17.95% | 5 | 22.73% | 2 | 11.76% |
| Somewhat Imp 3 | 12 | 30.77% | 9 | 40.91% | 3 | 17.65% |
| 4 | 10 | 25.64% | 6 | 27.27% | 4 | 23.53% |
| Very Important 5 | 6 | 15.38% | 2 | 9.09% | 4 | 23.53% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

15f) Considering the choices you made in questions 12, 13, and 14, how influential was **Familiarity** in your decisions?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 4 | 10.26% | 2 | 9.09% | 2 | 11.76% |
| 2 | 4 | 10.26% | 1 | 4.55% | 3 | 17.65% |
| Somewhat Imp 3 | 8 | 20.51% | 5 | 22.73% | 3 | 17.65% |
| 4 | 17 | 43.59% | 11 | 50.00% | 6 | 35.29% |
| Very Important 5 | 6 | 15.38% | 3 | 13.64% | 3 | 17.65% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

15g) Considering the choices you made in questions 12, 13, and 14, how influential was **Your Preference for less processed foods** in your decisions?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 2 | 5.13% | 1 | 4.55% | 1 | 5.88% |
| 2 | 6 | 15.38% | 0 | 0.00% | 6 | 35.29% |
| Somewhat Imp 3 | 8 | 20.51% | 7 | 31.82% | 1 | 5.88% |
| 4 | 10 | 25.64% | 8 | 36.36% | 2 | 11.76% |
| Very Important 5 | 13 | 33.33% | 6 | 27.27% | 7 | 41.18% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

15h) Considering the choices you made in questions 12, 13, and 14, how influential were **Health Reasons** in your decisions?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 3 | 7.69% | 2 | 9.09% | 1 | 5.88% |
| 2 | 3 | 7.69% | 1 | 4.55% | 2 | 11.76% |
| Somewhat Imp 3 | 8 | 20.51% | 2 | 9.09% | 6 | 35.29% |
| 4 | 10 | 25.64% | 8 | 36.36% | 2 | 11.76% |
| Very Important 5 | 13 | 35.14% | 8 | 38.10% | 5 | 31.25% |
| Total | 37 | | 21 | | 16 | |
| Average | | | | | | |

16a) Before receiving this survey, how would you have described your attitude toward whole grain foods?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|-----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Very Negative 1 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| 2 | 1 | 2.56% | 1 | 4.55% | 0 | 0.00% |
| Neutral 3 | 6 | 15.38% | 4 | 18.18% | 2 | 11.76% |
| 4 | 17 | 43.59% | 11 | 50.00% | 6 | 35.29% |
| Very Positive 5 | 15 | 38.46% | 6 | 27.27% | 9 | 52.94% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

16b) After reading the information provided in this survey, how would you now describe your attitude toward whole grain foods?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|-----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Very Negative 1 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| 2 | 1 | 2.56% | 1 | 4.55% | 0 | 0.00% |
| Neutral 3 | 2 | 5.13% | 1 | 4.55% | 1 | 5.88% |
| 4 | 16 | 41.03% | 11 | 50.00% | 5 | 29.41% |
| Very Positive 5 | 20 | 51.28% | 9 | 40.91% | 11 | 64.71% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

Caloric Intake

Nutritionists recommend average daily caloric intakes that range from 1,600 calories/day for many sedentary women and older adults and up to 2,800 calories/day for teenage boys and active men.

17. About how many calories do you think are in McDonald's Big Mac? (*A Big Mac has 495 calories!*)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| 100 or less | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| 350 | 3 | 7.69% | 1 | 4.55% | 2 | 11.76% |
| 600 | 11 | 28.21% | 6 | 27.27% | 5 | 29.41% |
| 850 | 7 | 17.95% | 5 | 22.73% | 2 | 11.76% |
| 1100 | 13 | 33.33% | 7 | 31.82% | 6 | 35.29% |
| more than 1100 | 5 | 12.82% | 3 | 13.64% | 2 | 11.76% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

18. About how many calories do you think are in an average 12 ounce can of regular soda? (A can of regular soda has **110** calories!)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| less than 50 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| 100 | 5 | 12.82% | 3 | 13.64% | 2 | 11.76% |
| 150 | 17 | 43.59% | 13 | 59.09% | 4 | 23.53% |
| 200 | 5 | 12.82% | 3 | 13.64% | 2 | 11.76% |
| 250 | 9 | 23.08% | 2 | 9.09% | 7 | 41.18% |
| more than 250 | 3 | 7.69% | 1 | 4.55% | 2 | 11.76% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

In this part of the survey, we would like some background information about you. We would like to remind you that all of this information will be treated as confidential, and that the results of this survey will only be used in summary form.

19. What is your gender?

| Sex | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Male | 10 | 25.64% | 6 | 15.38% | 4 | 23.53% |
| Female | 29 | 74.36% | 16 | 41.03% | 13 | 76.47% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

20. Are you pregnant or nursing?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Yes | 1 | 2.56% | 0 | 0.00% | 1 | 5.88% |
| No | 38 | 97.44% | 22 | 100.00% | 16 | 94.12% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

21. In what year were you born?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| less than or equal to 25yrs of age | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| 26-40 yrs of age | 7 | 17.95% | 1 | 4.55% | 6 | 35.29% |
| 41-55 yrs of age | 11 | 28.21% | 8 | 36.36% | 3 | 17.65% |
| 56-70 yrs of age | 15 | 38.46% | 11 | 50.00% | 4 | 23.53% |
| greater than or equal to 71 yrs of age | 6 | 15.38% | 2 | 9.09% | 4 | 23.53% |
| Total | 39 | | 22 | | 17 | |
| Average Year | 1952.82 | | 1953.36 | | 1952.12 | |
| Average Age | 55.18 | | 54.64 | | 55.88 | |

22. Approximately what are your height and weight?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|-------------------------------------|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| less than or equal to 60 inches | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| 61-65 inches | 8 | 20.51% | 3 | 13.64% | 5 | 29.41% |
| 66-70 inches | 23 | 58.97% | 14 | 63.64% | 9 | 52.94% |
| 71-75 inches | 7 | 17.95% | 5 | 22.73% | 2 | 11.76% |
| greater than or equal to 76 inches | 1 | 2.56% | 0 | 0.00% | 1 | 5.88% |
| Total | 39 | | 22 | | 17 | |
| Average height in inches | 67.79 | | 68.23 | | 67.24 | |
| less than or equal to 120 pounds | 3 | 7.89% | 2 | 9.09% | 1 | 6.25% |
| 121-150 pounds | 15 | 39.47% | 9 | 40.91% | 6 | 37.50% |
| 151-180 pounds | 9 | 23.68% | 6 | 27.27% | 3 | 18.75% |
| 181-210 pounds | 6 | 15.79% | 2 | 9.09% | 4 | 25.00% |
| greater than or equal to 211 pounds | 5 | 13.16% | 3 | 13.64% | 2 | 12.50% |
| Total | 38 | | 22 | | 16 | |
| Average weight in pounds | 164.11 | 164.91 | 163.00 | | | |

23a) Are you currently at or very close to what you would consider your ideal weight?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Yes | 20 | 51.28% | 11 | 50.00% | 9 | 52.94% |
| No | 19 | 48.72% | 11 | 50.00% | 8 | 47.06% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

23b) Relative to your ideal weight, do you think you are currently...(circle one)

i. Below ideal weight by about:

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| 5lbs | 0 | - | | - | | - |
| 10lbs | 0 | - | | - | | - |
| 15lbs | 0 | - | | - | | - |
| 20lbs | 0 | - | | - | | - |
| 25lbs | 0 | - | | - | | - |
| Total | 0 | | 0 | | 0 | |
| Average | | | | | | |

23b) Relative to your ideal weight, do you think you are currently...(circle one)

ii. Above ideal weight by about:

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| 5lbs | 1 | 5.26% | 1 | 9.09% | 0 | 0.00% |
| 10lbs | 5 | 26.32% | 3 | 27.27% | 2 | 25.00% |
| 15lbs | 3 | 15.79% | 2 | 18.18% | 1 | 12.50% |
| 20lbs | 2 | 10.53% | 1 | 9.09% | 1 | 12.50% |
| 25lbs | 1 | 5.26% | 0 | 0.00% | 1 | 12.50% |
| 30lbs | 1 | 5.26% | 0 | 0.00% | 1 | 12.50% |
| 40lbs | 3 | 15.79% | 2 | 18.18% | 1 | 12.50% |
| 50lbs or more | 3 | 15.79% | 2 | 18.18% | 1 | 12.50% |
| Total | 19 | | 11 | | 8 | |
| Average | | | | | | |

24. On average, how many times do you eat out each week? (Please choose only one answer.)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---------------------------|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Hardly ever | 9 | 23.08% | 6 | 27.27% | 3 | 17.65% |
| 1-3 times each week | 24 | 61.54% | 12 | 54.55% | 12 | 70.59% |
| 4-6 times each week | 5 | 12.82% | 3 | 13.64% | 2 | 11.76% |
| 7 or more times each week | 1 | 2.56% | 1 | 4.55% | 0 | 0.00% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

25. On average, how many times per week do you exercise? (*Please choose only one response.*)

| Choice | Overall | | Ver1 | | Ver2 | |
|---------------------------|-----------|---------|-----------|---------|-----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Hardly ever | 9 | 23.08% | 6 | 27.27% | 3 | 17.65% |
| 1-3 times each week | 14 | 35.90% | 8 | 36.36% | 6 | 35.29% |
| 4-6 times each week | 14 | 35.90% | 7 | 31.82% | 7 | 41.18% |
| 7 or more times each week | 2 | 5.13% | 1 | 4.55% | 1 | 5.88% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

26. What is the highest level of education you have completed? *Please mark only one response.*

| Choice | Overall | | Ver1 | | Ver2 | |
|----------------------|-----------|------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Some high school | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| High school graduate | 3 | 7.69% | 2 | 9.09% | 1 | 5.88% |
| Some college | 13 | 33.33% | 7 | 31.82% | 6 | 35.29% |
| College graduate | 14 | 35.90% | 9 | 40.91% | 5 | 29.41% |
| Post graduate | 9 | 23.08% | 4 | 18.18% | 5 | 29.41% |
| Total | 39 | | 22 | | 17 | |
| Average | | | | | | |

27. In order to evaluate if we are getting a cross section of all people, we would like to know your approximate 2006 household income before taxes. *Please mark only one response.*

| Choice | Overall | | Ver1 | | Ver2 | |
|-------------------------|-----------|---------|-----------|---------|-----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Less than \$20,000 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| \$20,000 up to \$30,000 | 3 | 9.68% | 3 | 16.67% | 0 | 0.00% |
| \$30,000 up to \$40,000 | 2 | 6.45% | 0 | 0.00% | 2 | 15.38% |
| \$40,000 up to \$50,000 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| \$50,000 up to 70,000 | 11 | 35.48% | 6 | 33.33% | 5 | 38.46% |
| \$70,000 up to 100,000 | 9 | 29.03% | 4 | 22.22% | 5 | 38.46% |
| \$100,000 up to 150,000 | 3 | 9.68% | 2 | 11.11% | 1 | 7.69% |
| more than \$150,000 | 3 | 9.68% | 3 | 16.67% | 0 | 0.00% |
| Total | 31 | | 18 | | 13 | |
| Average | | | | | | |

28. Including yourself, how many people live in your household? *Please fill in the blank.*

| Number of People | Overall | | Ver1 | | Ver2 | |
|------------------|-----------|------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| 1 | 7 | 20.59% | 4 | 20.00% | 3 | 21.43% |
| 2 | 17 | 50.00% | 10 | 50.00% | 7 | 50.00% |
| 3 | 3 | 8.82% | 2 | 10.00% | 1 | 7.14% |
| 4 | 3 | 8.82% | 1 | 5.00% | 2 | 14.29% |
| 5 | 4 | 11.76% | 3 | 15.00% | 1 | 7.14% |
| Total | 34 | | 20 | | 14 | |
| Average | | | | | | |

29. Are there any children living in your household? *Please circle*

a) under age 6?

| Under Age 6 | Overall | | Ver1 | | Ver2 | |
|----------------|-----------|------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Yes | 4 | 11.76% | 1 | 5.00% | 3 | 21.43% |
| No | 30 | 88.24% | 19 | 95.00% | 11 | 78.57% |
| Total | 34 | | 20 | | 14 | |
| Average | | | | | | |

29. Are there any children living in your household? *Please circle*

b) between 6 and 18?

| Between 6 and 18 | Overall | | Ver1 | | Ver2 | |
|------------------|-----------|------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Yes | 7 | 20.59% | 4 | 20.00% | 3 | 21.43% |
| No | 27 | 79.41% | 16 | 80.00% | 11 | 78.57% |
| Total | 34 | | 20 | | 14 | |
| Average | | | | | | |

30. What is your marital status? *(Please mark only one response.)*

| Choice | Overall | | Ver1 | | Ver2 | |
|--------------------------|-----------|------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Single | 2 | 5.88% | 2 | 10.00% | 0 | 0.00% |
| Married | 30 | 88.24% | 16 | 80.00% | 14 | 100.00% |
| Have partner (unmarried) | 1 | 2.94% | 1 | 5.00% | 0 | 0.00% |
| Divorced | 1 | 2.94% | 1 | 5.00% | 0 | 0.00% |
| Spouse Deceased | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 34 | | 20 | | 14 | |
| Average | | | | | | |

Appendix C: Survey Results

Department of Agricultural Economics
KANSAS STATE UNIVERSITY

5/5/2008

Mail survey results on consumer preferences for grain products sent to Topeka, KS in March of 2008.

Grain Foods Consumption Survey

Kansas State University Department of Agricultural Economics

We are interested in your perceptions and opinions about the health benefits of various foods we eat. This survey is in multiple-choice and fill-in-the-blank format and will take approximately 8 or 10 minutes to complete. Please return it in the enclosed postage paid envelope.

1.a) When you are purchasing food products, how often do you check the label for **Nutrition** information?

| Choice | <u>Overall</u> | | <u>Ver1 (with health info)</u> | | <u>Ver2 (w/out health info)</u> | |
|----------------|----------------|------------|--------------------------------|------------|---------------------------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 4 | 6.35% | 3 | 9.09% | 1 | 3.33% |
| 2 | 2 | 3.17% | 1 | 3.03% | 1 | 3.33% |
| Sometimes 3 | 15 | 23.81% | 8 | 24.24% | 7 | 23.33% |
| 4 | 24 | 38.10% | 13 | 39.39% | 11 | 36.67% |
| Always 5 | 18 | 28.57% | 8 | 24.24% | 10 | 33.33% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

1.b) When you are purchasing food products, how often do you check the label for **Country of origin** information?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 27 | 44.26% | 17 | 51.52% | 10 | 35.71% |
| 2 | 7 | 11.48% | 2 | 6.06% | 5 | 17.86% |
| Sometimes 3 | 15 | 24.59% | 8 | 24.24% | 7 | 25.00% |
| 4 | 8 | 13.11% | 4 | 12.12% | 4 | 14.29% |
| Always 5 | 4 | 6.56% | 2 | 6.06% | 2 | 7.14% |
| Total | 61 | | 33 | | 28 | |
| Average | | | | | | |

1.c) When you are purchasing food products, how often do you check the label for each **Ingredient** information?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 4 | 6.35% | 3 | 9.09% | 1 | 3.33% |
| 2 | 4 | 6.35% | 2 | 6.06% | 2 | 6.67% |
| Sometimes 3 | 16 | 25.40% | 7 | 21.21% | 9 | 30.00% |
| 4 | 22 | 34.92% | 14 | 42.42% | 8 | 26.67% |
| Always 5 | 17 | 26.98% | 7 | 21.21% | 10 | 33.33% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

1.d) When you are purchasing food products, how often do you check the label for **Expiration** or **Sell-by Date** information?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 1 | 1.59% | 1 | 3.03% | 0 | 0.00% |
| 2 | 5 | 7.94% | 1 | 3.03% | 4 | 13.33% |
| Sometimes 3 | 12 | 19.05% | 7 | 21.21% | 5 | 16.67% |
| 4 | 13 | 20.63% | 10 | 30.30% | 3 | 10.00% |
| Always 5 | 32 | 50.79% | 14 | 42.42% | 18 | 60.00% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

2) Approximately how often does your household consume **pasta**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| every day | 1 | 1.56% | 0 | 0.00% | 1 | 3.23% |
| 3 to 4 times/week | 4 | 6.25% | 1 | 3.03% | 3 | 9.68% |
| 1 to 2 times/week | 19 | 29.69% | 8 | 24.24% | 11 | 35.48% |
| less than once per week | 40 | 62.50% | 24 | 72.73% | 16 | 51.61% |
| never, we do not eat pasta | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 64 | | 33 | | 31 | |
| Average | | | | | | |

3) Approximately how often does your household consume rice?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---------------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| every day | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| 3 to 4 times/week | 4 | 6.25% | 1 | 3.03% | 3 | 9.68% |
| 1 to 2 times/week | 14 | 21.88% | 9 | 27.27% | 5 | 16.13% |
| less than once per week | 42 | 65.63% | 21 | 63.64% | 21 | 67.74% |
| never, we do not eat rice | 4 | 6.25% | 2 | 6.06% | 2 | 6.45% |
| Total | 64 | | 33 | | 31 | |
| Average | | | | | | |

4) Approximately how often does your household consume bread?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| every day | 37 | 57.81% | 24 | 72.73% | 13 | 41.94% |
| 3 to 4 times/week | 19 | 29.69% | 6 | 18.18% | 13 | 41.94% |
| 1 to 2 times/week | 7 | 10.94% | 2 | 6.06% | 5 | 16.13% |
| less than once per week | 1 | 1.56% | 1 | 3.03% | 0 | 0.00% |
| never, we do not eat bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 64 | | 33 | | 31 | |
| Average | | | | | | |

5.a) How often does the nutritional value influence your decision when purchasing **Bread**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 2 | 3.13% | 1 | 3.03% | 1 | 3.23% |
| 2 | 6 | 9.38% | 3 | 9.09% | 3 | 9.68% |
| Sometimes 3 | 13 | 20.31% | 5 | 15.15% | 8 | 25.81% |
| 4 | 19 | 29.69% | 12 | 36.36% | 7 | 22.58% |
| Always 5 | 24 | 37.50% | 12 | 36.36% | 12 | 38.71% |
| Total | 64 | | 33 | | 31 | |
| Average | | | | | | |

5.b) How often does the nutritional value influence your decision when purchasing **Rice**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 14 | 22.95% | 6 | 19.35% | 8 | 26.67% |
| 2 | 10 | 16.39% | 6 | 19.35% | 4 | 13.33% |
| Sometimes 3 | 15 | 24.59% | 7 | 22.58% | 8 | 26.67% |
| 4 | 14 | 22.95% | 5 | 16.13% | 9 | 30.00% |
| Always 5 | 8 | 13.11% | 7 | 22.58% | 1 | 3.33% |
| Total | 61 | | 31 | | 30 | |
| Average | | | | | | |

5.c) How often does the nutritional value influence your decision when purchasing **Pasta**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 11 | 17.46% | 5 | 15.15% | 6 | 20.00% |
| 2 | 10 | 15.87% | 6 | 18.18% | 4 | 13.33% |
| Sometimes 3 | 19 | 30.16% | 10 | 30.30% | 9 | 30.00% |
| 4 | 14 | 22.22% | 7 | 21.21% | 7 | 23.33% |
| Always 5 | 9 | 14.29% | 5 | 15.15% | 4 | 13.33% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

6.a) How often does price influence your decision when purchasing **Bread**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 10 | 15.63% | 5 | 15.15% | 5 | 16.13% |
| 2 | 9 | 14.06% | 3 | 9.09% | 6 | 19.35% |
| Sometimes 3 | 23 | 35.94% | 11 | 33.33% | 12 | 38.71% |
| 4 | 11 | 17.19% | 9 | 27.27% | 2 | 6.45% |
| Always 5 | 11 | 17.19% | 5 | 15.15% | 6 | 19.35% |
| Total | 64 | | 33 | | 31 | |
| Average | | | | | | |

6.b) How often does price influence your decision when purchasing **Rice**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 15 | 23.81% | 7 | 21.88% | 8 | 25.81% |
| 2 | 10 | 15.87% | 3 | 9.38% | 7 | 22.58% |
| Sometimes 3 | 19 | 30.16% | 10 | 31.25% | 9 | 29.03% |
| 4 | 11 | 17.46% | 7 | 21.88% | 4 | 12.90% |
| Always 5 | 8 | 12.70% | 5 | 15.63% | 3 | 9.68% |
| Total | 63 | | 32 | | 31 | |
| Average | | | | | | |

6.c) How often does price influence your decision when purchasing **Pasta**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 11 | 17.19% | 6 | 18.18% | 5 | 16.13% |
| 2 | 9 | 14.06% | 3 | 9.09% | 6 | 19.35% |
| Sometimes 3 | 23 | 35.94% | 11 | 33.33% | 12 | 38.71% |
| 4 | 12 | 18.75% | 8 | 24.24% | 4 | 12.90% |
| Always 5 | 9 | 14.06% | 5 | 15.15% | 4 | 12.90% |
| Total | 64 | | 33 | | 31 | |
| Average | | | | | | |

7.a) How often does taste influence your decision when purchasing **Bread**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 2 | 3.23% | 1 | 3.13% | 1 | 3.33% |
| 2 | 3 | 4.84% | 1 | 3.13% | 2 | 6.67% |
| Sometimes 3 | 8 | 12.90% | 2 | 6.25% | 6 | 20.00% |
| 4 | 10 | 16.13% | 6 | 18.75% | 4 | 13.33% |
| Always 5 | 39 | 62.90% | 22 | 68.75% | 17 | 56.67% |
| Total | 62 | | 32 | | 30 | |
| Average | | | | | | |

7.b) How often does *taste* influence your decision when purchasing **Rice**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 6 | 9.84% | 3 | 9.68% | 3 | 10.00% |
| 2 | 7 | 11.48% | 4 | 12.90% | 3 | 10.00% |
| Sometimes 3 | 15 | 24.59% | 6 | 19.35% | 9 | 30.00% |
| 4 | 12 | 19.67% | 6 | 19.35% | 6 | 20.00% |
| Always 5 | 21 | 34.43% | 12 | 38.71% | 9 | 30.00% |
| Total | 61 | | 31 | | 30 | |
| Average | | | | | | |

7.c) How often does *taste* influence your decision when purchasing **Pasta**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 5 | 8.06% | 2 | 6.25% | 3 | 9.38% |
| 2 | 6 | 9.68% | 4 | 12.50% | 2 | 6.25% |
| Sometimes 3 | 17 | 27.42% | 7 | 21.88% | 10 | 31.25% |
| 4 | 11 | 17.74% | 5 | 15.63% | 6 | 18.75% |
| Always 5 | 23 | 37.10% | 14 | 43.75% | 9 | 28.13% |
| Total | 62 | | 32 | | 30 | |
| Average | | | | | | |

8) What price do you normally pay for a loaf of bread?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--------------------------------------|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| about \$1.00 or less | 2 | 3.33% | 1 | 3.13% | 1 | 3.57% |
| about \$1.50 | 8 | 13.33% | 6 | 18.75% | 2 | 7.14% |
| about \$2.00 | 19 | 31.67% | 9 | 28.13% | 10 | 35.71% |
| about \$2.50 | 20 | 33.33% | 11 | 34.38% | 9 | 32.14% |
| about \$3.00 or more | 7 | 11.67% | 3 | 9.38% | 4 | 14.29% |
| I don't remember what I normally pay | 4 | 6.67% | 2 | 6.25% | 2 | 7.14% |
| Total | 60 | | 32 | | 28 | |
| Average | | | | | | |

Whole Grain Products and Enriched Grain Products

Whole grain products are made with the whole kernel of grain. The grain kernel has three components: bran, endosperm and germ. The bran (outer layer) contains the largest amount of fiber, the endosperm (middle layer) contains mostly protein and carbohydrates, and the germ (inner part) is a rich source of trace minerals, B vitamins, and antioxidants. Whole grain products include whole wheat bread, brown rice, and whole wheat pasta.

White flour and white rice are made only from the endosperm of the grain kernel. White bread and pasta products and white rice are typically **enriched** through the addition of minerals and vitamins.

Health Benefits of Whole Grain Foods While enriched grain products are a good source of iron and B vitamins such as thiamine, niacin, riboflavin and folic acid, consumption of **whole grain products** has been linked to numerous health benefits. These benefits include reduced risk of heart disease, cancer and diabetes. Evidence also suggests that whole grain foods may contribute to achieving and maintaining a healthy weight. **(Version 1 Only)**

9.a) When you do your food shopping, how often do you look for whole grain versions of **Bread**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 3 | 4.84% | 2 | 6.25% | 1 | 3.33% |
| 2 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Sometimes 3 | 8 | 12.90% | 2 | 6.25% | 6 | 20.00% |
| 4 | 13 | 20.97% | 10 | 31.25% | 3 | 10.00% |
| Always 5 | 38 | 61.29% | 18 | 56.25% | 20 | 66.67% |
| Total | 62 | | 32 | | 30 | |
| Average | | | | | | |

9.b) When you do your food shopping, how often do you look for whole grain versions of **Rice**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 11 | 18.33% | 7 | 22.58% | 4 | 13.79% |
| 2 | 9 | 15.00% | 5 | 16.13% | 4 | 13.79% |
| Sometimes 3 | 20 | 33.33% | 8 | 25.81% | 12 | 41.38% |
| 4 | 10 | 16.67% | 5 | 16.13% | 5 | 17.24% |
| Always 5 | 10 | 16.67% | 6 | 19.35% | 4 | 13.79% |
| Total | 60 | | 31 | | 29 | |
| Average | | | | | | |

9.c) When you do your food shopping, how often do you look for whole grain versions of **Pasta**?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Never 1 | 11 | 18.03% | 6 | 18.75% | 5 | 15.63% |
| 2 | 5 | 8.20% | 3 | 9.38% | 2 | 6.25% |
| Sometimes 3 | 22 | 36.07% | 10 | 31.25% | 12 | 37.50% |
| 4 | 15 | 24.59% | 9 | 28.13% | 6 | 18.75% |
| Always 5 | 8 | 13.11% | 4 | 12.50% | 4 | 12.50% |
| Total | 61 | | 32 | | 29 | |
| Average | | | | | | |

10) Which of the following best describes your knowledge of whole grain foods before receiving this survey?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I had never heard of whole grain foods until now | 1 | 1.61% | 1 | 3.13% | 0 | 0.00% |
| I had heard of whole grain foods, but did not know much about them. | 13 | 20.97% | 5 | 15.63% | 8 | 26.67% |
| I knew quite a lot about whole grain foods. | 48 | 77.42% | 26 | 81.25% | 22 | 73.33% |
| Total | 62 | | 32 | | 30 | |
| Average | | | | | | |

11) From what sources have you received most of your information about whole grain foods? (Please mark all that apply.)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---------------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Newspaper/Magazines | 32 | 49.23% | 16 | 47.06% | 16 | 51.61% |
| School/Workplace | 11 | 16.92% | 7 | 20.59% | 4 | 12.90% |
| In-store information | 19 | 29.23% | 9 | 26.47% | 10 | 32.26% |
| Radio/TV | 13 | 20.00% | 7 | 20.59% | 6 | 19.35% |
| Internet | 14 | 21.54% | 6 | 17.65% | 8 | 25.81% |
| Product labels | 38 | 58.46% | 21 | 61.76% | 17 | 54.84% |
| Family/Friends/Colleagues | 20 | 30.77% | 9 | 26.47% | 11 | 35.48% |
| Health Care Provider | 15 | 23.08% | 6 | 17.65% | 9 | 29.03% |
| Other | 12 | 18.46% | 6 | 17.65% | 6 | 19.35% |

| | | | | | | |
|--------------------------|------------|--|-----------|--|-----------|--|
| Total Respondents | 174 | | 87 | | 87 | |
| Average | | | | | | |

The questions on the following pages will ask about which product you would be most likely to choose – a whole grain product or an enriched product – in a shopping situation. Please try to answer the question as if you were making the choice while shopping in your local supermarket.

Your choices when buying bread:

12) If you were purchasing one loaf of bread at your local supermarket and you could choose between whole wheat bread (at a) \$1.79, b) \$2.09, c) \$2.39, d) \$2.69, e) \$2.99 for a 12oz loaf) and the same brand of enriched white bread (at \$2.09 for a 12oz loaf), which type of bread would you buy? *(Please mark only one answer)*

| Choice | Overall | | Ver1 | | Ver2 | |
|--|-----------|---------|-----------|---------|-----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole wheat</u> bread | 39 | 60.94% | 21 | 63.64% | 18 | 58.06% |
| I'd probably buy the <u>whole wheat</u> bread | 12 | 18.75% | 6 | 18.18% | 6 | 19.35% |
| I'd be unsure but leaning toward <u>whole wheat</u> bread | 4 | 6.25% | 2 | 6.06% | 2 | 6.45% |
| I'd be unsure but leaning toward <u>enriched white</u> bread | 2 | 3.13% | 1 | 3.03% | 1 | 3.23% |
| I'd probably buy the <u>enriched white</u> bread | 4 | 6.25% | 2 | 6.06% | 2 | 6.45% |
| I'd definitely buy the <u>enriched white</u> bread | 3 | 4.69% | 1 | 3.03% | 2 | 6.45% |
| Total | 64 | | 33 | | 31 | |
| Average | | | | | | |

12.a) If you were purchasing one loaf of bread at your local supermarket and you could choose between whole wheat bread (at \$1.79 for a 12oz loaf) and the same brand of enriched white bread (at \$2.09 for a 12oz loaf), which type of bread would you buy? *(Please mark only one answer)*

| Choice | Overall | | Ver1 | | Ver2 | |
|--|----------|---------|----------|---------|----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole wheat</u> bread | 6 | 66.67% | 5 | 100.00% | 1 | 25.00% |
| I'd probably buy the <u>whole wheat</u> bread | 2 | 22.22% | 0 | 0.00% | 2 | 50.00% |
| I'd be unsure but leaning toward <u>whole wheat</u> bread | 1 | 11.11% | 0 | 0.00% | 1 | 25.00% |
| I'd be unsure but leaning toward <u>enriched white</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd probably buy the <u>enriched white</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd definitely buy the <u>enriched white</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 9 | | 5 | | 4 | |
| Average | | | | | | |

12.b) If you were purchasing one loaf of bread at your local supermarket and you could choose between whole wheat bread (at \$2.09 for a 12oz loaf) and the same brand of enriched white bread (also at \$2.09 for a 12oz loaf), which type of bread would you buy? *(Please mark only one answer)*

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole wheat</u> bread | 10 | 90.91% | 6 | 100.00% | 4 | 80.00% |
| I'd probably buy the <u>whole wheat</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>whole wheat</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd probably buy the <u>enriched white</u> bread | 1 | 9.09% | 0 | 0.00% | 1 | 20.00% |
| I'd definitely buy the <u>enriched white</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 11 | | 6 | | 5 | |
| Average | | | | | | |

12.c) If you were purchasing one loaf of bread at your local supermarket and you could choose between whole wheat bread (at \$2.39 for a 12oz loaf) and the same brand of enriched white bread (at \$2.09 for a 12oz loaf), which type of bread would you buy? *(Please mark only one answer)*

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole wheat</u> bread | 8 | 42.11% | 4 | 44.44% | 4 | 40.00% |
| I'd probably buy the <u>whole wheat</u> bread | 5 | 26.32% | 3 | 33.33% | 2 | 20.00% |
| I'd be unsure but leaning toward <u>whole wheat</u> bread | 1 | 5.26% | 1 | 11.11% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white</u> bread | 1 | 5.26% | 0 | 0.00% | 1 | 10.00% |
| I'd probably buy the <u>enriched white</u> bread | 1 | 5.26% | 0 | 0.00% | 1 | 10.00% |
| I'd definitely buy the <u>enriched white</u> bread | 3 | 15.79% | 1 | 11.11% | 2 | 20.00% |
| Total | 19 | | 9 | | 10 | |
| Average | | | | | | |

12.d) If you were purchasing one loaf of bread at your local supermarket and you could choose between whole wheat bread (at \$2.69 for a 12oz loaf) and the same brand of enriched white bread (at \$2.09 for a 12oz loaf), which type of bread would you buy? *(Please mark only one answer)*

| Choice | Overall | | Ver1 | | Ver2 | |
|--|-----------|---------|----------|---------|----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole wheat</u> bread | 6 | 40.00% | 1 | 14.29% | 5 | 62.50% |
| I'd probably buy the <u>whole wheat</u> bread | 4 | 26.67% | 2 | 28.57% | 2 | 25.00% |
| I'd be unsure but leaning toward <u>whole wheat</u> bread | 2 | 13.33% | 1 | 14.29% | 1 | 12.50% |
| I'd be unsure but leaning toward <u>enriched white</u> bread | 1 | 6.67% | 1 | 14.29% | 0 | 0.00% |
| I'd probably buy the <u>enriched white</u> bread | 2 | 13.33% | 2 | 28.57% | 0 | 0.00% |
| I'd definitely buy the <u>enriched white</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 15 | | 7 | | 8 | |
| Average | | | | | | |

12.e) If you were purchasing one loaf of bread at your local supermarket and you could choose between whole wheat bread (at \$2.99 for a 12oz loaf) and the same brand of enriched white bread (at \$2.09 for a 12oz loaf), which type of bread would you buy? *(Please mark only one answer)*

| Choice | Overall | | Ver1 | | Ver2 | |
|--|-----------|---------|----------|---------|----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole wheat</u> bread | 9 | 90.00% | 5 | 83.33% | 4 | 100.00% |
| I'd probably buy the <u>whole wheat</u> bread | 1 | 10.00% | 1 | 16.67% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>whole wheat</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd probably buy the <u>enriched white</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd definitely buy the <u>enriched white</u> bread | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 10 | | 6 | | 4 | |
| Average | | | | | | |

Your choices when buying rice:

13) If you were purchasing a single 2 lb (32 ounce) bag of rice at your local supermarket and you could choose between whole grain rice (at a) \$2.69, b) \$1.49, c) \$1.79, d) \$2.09, e) \$2.39 for a 2 lb bag) and the same brand of enriched white rice (at \$1.79 for a 2 lb bag), which type of rice would you buy?

| Choice | Overall | | Ver1 | | Ver2 | |
|---|-----------|---------|-----------|---------|-----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain rice</u> | 16 | 25.81% | 10 | 33.33% | 6 | 20.69% |
| I'd probably buy the <u>whole grain rice</u> | 17 | 27.42% | 8 | 26.67% | 9 | 31.03% |
| I'd be unsure but leaning toward <u>whole grain rice</u> | 4 | 6.45% | 2 | 6.67% | 2 | 6.90% |
| I'd be unsure but leaning toward <u>enriched white rice</u> | 7 | 11.29% | 3 | 10.00% | 4 | 13.79% |
| I'd probably buy the <u>enriched white rice</u> | 11 | 17.74% | 6 | 20.00% | 5 | 17.24% |
| I'd definitely buy the <u>enriched white rice</u> | 7 | 11.29% | 1 | 3.33% | 3 | 10.34% |
| Total | 62 | | 30 | | 29 | |
| Average | | | | | | |

13.a) If you were purchasing a single 2 lb (32 ounce) bag of rice at your local supermarket and you could choose between whole grain rice (at \$2.69 for a 2 lb bag) and the same brand of enriched white rice (at \$1.79 for a 2 lb bag), which type of rice would you buy?

| Choice | Overall | | Ver1 | | Ver2 | |
|---|----------|---------|----------|---------|----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain rice</u> | 3 | 33.33% | 3 | 60.00% | 0 | 0.00% |
| I'd probably buy the <u>whole grain rice</u> | 2 | 22.22% | 2 | 40.00% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>whole grain rice</u> | 1 | 11.11% | 0 | 0.00% | 1 | 25.00% |
| I'd be unsure but leaning toward <u>enriched white rice</u> | 1 | 11.11% | 0 | 0.00% | 1 | 25.00% |
| I'd probably buy the <u>enriched white rice</u> | 1 | 11.11% | 0 | 0.00% | 1 | 25.00% |
| I'd definitely buy the <u>enriched white rice</u> | 1 | 11.11% | 0 | 0.00% | 1 | 25.00% |
| Total | 9 | | 5 | | 4 | |
| Average | | | | | | |

13.b) If you were purchasing a single 2 lb (32 ounce) bag of rice at your local supermarket and you could choose between whole grain rice (at \$1.49 for a 2 lb bag) and the same brand of enriched white rice (at \$1.79 for a 2 lb bag), which type of rice would you buy?

| Choice | Overall | | Ver1 | | Ver2 | |
|---|-----------|---------|----------|---------|----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain rice</u> | 5 | 50.00% | 3 | 50.00% | 2 | 50.00% |
| I'd probably buy the <u>whole grain rice</u> | 1 | 10.00% | 0 | 0.00% | 1 | 25.00% |
| I'd be unsure but leaning toward <u>whole grain rice</u> | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white rice</u> | 2 | 20.00% | 1 | 16.67% | 1 | 25.00% |
| I'd probably buy the <u>enriched white rice</u> | 2 | 20.00% | 2 | 33.33% | 0 | 0.00% |
| I'd definitely buy the <u>enriched white rice</u> | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 10 | | 6 | | 4 | |
| Average | | | | | | |

13.c) If you were purchasing a single 2 lb (32 ounce) bag of rice at your local supermarket and you could choose between whole grain rice (at \$1.79 for a 2 lb bag) and the same brand of enriched white rice (also at \$1.79 for a 2 lb bag), which type of rice would you buy?

| Choice | Overall | | Ver1 | | Ver2 | |
|---|-----------|---------|----------|---------|-----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain rice</u> | 4 | 21.05% | 2 | 22.22% | 2 | 20.00% |
| I'd probably buy the <u>whole grain rice</u> | 5 | 26.32% | 2 | 22.22% | 3 | 30.00% |
| I'd be unsure but leaning toward <u>whole grain rice</u> | 2 | 10.53% | 1 | 11.11% | 1 | 10.00% |
| I'd be unsure but leaning toward <u>enriched white rice</u> | 1 | 5.26% | 0 | 0.00% | 1 | 10.00% |
| I'd probably buy the <u>enriched white rice</u> | 4 | 21.05% | 2 | 22.22% | 2 | 20.00% |
| I'd definitely buy the <u>enriched white rice</u> | 3 | 15.79% | 2 | 22.22% | 1 | 10.00% |
| Total | 19 | | 9 | | 10 | |
| Average | | | | | | |

13.d) If you were purchasing a single 2 lb (32 ounce) bag of rice at your local supermarket and you could choose between whole grain rice (at \$2.09 for a 2 lb bag) and the same brand of enriched white rice (at \$1.79 for a 2 lb bag), which type of rice would you buy?

| Choice | Overall | | Ver1 | | Ver2 | |
|---|-----------|---------|----------|---------|----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain rice</u> | 1 | 7.14% | 0 | 0.00% | 1 | 14.29% |
| I'd probably buy the <u>whole grain rice</u> | 5 | 35.71% | 1 | 14.29% | 4 | 57.14% |
| I'd be unsure but leaning toward <u>whole grain rice</u> | 1 | 7.14% | 1 | 14.29% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white rice</u> | 3 | 21.43% | 2 | 28.57% | 1 | 14.29% |
| I'd probably buy the <u>enriched white rice</u> | 2 | 14.29% | 2 | 28.57% | 0 | 0.00% |
| I'd definitely buy the <u>enriched white rice</u> | 2 | 14.29% | 1 | 14.29% | 1 | 14.29% |
| Total | 14 | | 7 | | 7 | |
| Average | | | | | | |

13.e) If you were purchasing a single 2 lb (32 ounce) bag of rice at your local supermarket and you could choose between whole grain rice (at \$2.39 for a 2 lb bag) and the same brand of enriched white rice (at \$1.79 for a 2 lb bag), which type of rice would you buy?

| Choice | Overall | | Ver1 | | Ver2 | |
|---|-----------|---------|----------|---------|----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain rice</u> | 3 | 30.00% | 2 | 33.33% | 1 | 25.00% |
| I'd probably buy the <u>whole grain rice</u> | 4 | 40.00% | 3 | 50.00% | 1 | 25.00% |
| I'd be unsure but leaning toward <u>whole grain rice</u> | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white rice</u> | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd probably buy the <u>enriched white rice</u> | 2 | 20.00% | 0 | 0.00% | 2 | 50.00% |
| I'd definitely buy the <u>enriched white rice</u> | 1 | 10.00% | 1 | 16.67% | 0 | 0.00% |
| Total | 10 | | 6 | | 4 | |
| Average | | | | | | |

Your choices when buying pasta:

14) If you were purchasing a single 1 lb (16 ounce) package of pasta at your local supermarket and you could choose between whole grain pasta (at a) \$2.09, b) \$2.39, c) \$1.19, d) \$1.49, e) \$1.79 for a 1 lb package) and the same brand of enriched white pasta (at \$1.49 for a 1 lb package), which type of pasta would you buy?

| Choice | Overall | | Ver1 | | Ver2 | |
|--|-----------|---------|-----------|---------|-----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain pasta</u> | 19 | 29.23% | 11 | 32.35% | 8 | 25.81% |
| I'd probably buy the <u>whole grain pasta</u> | 11 | 16.92% | 5 | 14.71% | 6 | 19.35% |
| I'd be unsure but leaning toward <u>whole grain pasta</u> | 6 | 9.23% | 6 | 17.65% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white pasta</u> | 11 | 16.92% | 4 | 11.76% | 7 | 22.58% |
| I'd probably buy the <u>enriched white pasta</u> | 12 | 18.46% | 5 | 14.71% | 7 | 22.58% |
| I'd definitely buy the <u>enriched white pasta</u> | 6 | 9.23% | 3 | 8.82% | 3 | 9.68% |
| Total | 65 | | 34 | | 31 | |
| Average | | | | | | |

14.a) If you were purchasing a single 1 lb (16 ounce) package of pasta at your local supermarket and you could choose between whole grain pasta (at \$2.09 for a 1 lb package) and the same brand of enriched white pasta (at \$1.49 for a 1 lb package), which type of pasta would you buy?

| Choice | Overall | | Ver1 | | Ver2 | |
|--|----------|---------|----------|---------|----------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain pasta</u> | 3 | 33.33% | 2 | 40.00% | 1 | 25.00% |
| I'd probably buy the <u>whole grain pasta</u> | 3 | 33.33% | 1 | 20.00% | 2 | 50.00% |
| I'd be unsure but leaning toward <u>whole grain pasta</u> | 1 | 11.11% | 1 | 20.00% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white pasta</u> | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd probably buy the <u>enriched white pasta</u> | 1 | 11.11% | 1 | 20.00% | 0 | 0.00% |
| I'd definitely buy the <u>enriched white pasta</u> | 1 | 11.11% | 0 | 0.00% | 1 | 25.00% |
| Total | 9 | | 5 | | 4 | |
| Average | | | | | | |

14.b) If you were purchasing a single 1 lb (16 ounce) package of pasta at your local supermarket and you could choose between whole grain pasta (at \$2.39 for a 1 lb package) and the same brand of enriched white pasta (at \$1.49 for a 1 lb package), which type of pasta would you buy?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain pasta</u> | 2 | 18.18% | 1 | 16.67% | 1 | 20.00% |
| I'd probably buy the <u>whole grain pasta</u> | 2 | 18.18% | 1 | 16.67% | 1 | 20.00% |
| I'd be unsure but leaning toward <u>whole grain pasta</u> | 2 | 18.18% | 2 | 33.33% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white pasta</u> | 3 | 27.27% | 1 | 16.67% | 2 | 40.00% |
| I'd probably buy the <u>enriched white pasta</u> | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd definitely buy the <u>enriched white pasta</u> | 2 | 18.18% | 1 | 16.67% | 1 | 20.00% |
| Total | 11 | | 6 | | 5 | |
| Average | | | | | | |

14.c) If you were purchasing a single 1 lb (16 ounce) package of pasta at your local supermarket and you could choose between whole grain pasta (at \$1.19 for a 1 lb package) and the same brand of enriched white pasta (at \$1.49 for a 1 lb package), which type of pasta would you buy?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain pasta</u> | 4 | 20.00% | 2 | 20.00% | 2 | 20.00% |
| I'd probably buy the <u>whole grain pasta</u> | 4 | 20.00% | 3 | 30.00% | 1 | 10.00% |
| I'd be unsure but leaning toward <u>whole grain pasta</u> | 1 | 5.00% | 1 | 10.00% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white pasta</u> | 4 | 20.00% | 1 | 10.00% | 3 | 30.00% |
| I'd probably buy the <u>enriched white pasta</u> | 5 | 25.00% | 2 | 20.00% | 3 | 30.00% |
| I'd definitely buy the <u>enriched white pasta</u> | 2 | 10.00% | 1 | 10.00% | 1 | 10.00% |
| Total | 20 | | 10 | | 10 | |
| Average | | | | | | |

14.d) If you were purchasing a single 1 lb (16 ounce) package of pasta at your local supermarket and you could choose between whole grain pasta (at \$1.49 for a 1 lb package) and the same brand of enriched white pasta (also at \$1.49 for a 1 lb package), which type of pasta would you buy?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain pasta</u> | 6 | 40.00% | 3 | 42.86% | 3 | 37.50% |
| I'd probably buy the <u>whole grain pasta</u> | 2 | 13.33% | 0 | 0.00% | 2 | 25.00% |
| I'd be unsure but leaning toward <u>whole grain pasta</u> | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white pasta</u> | 3 | 20.00% | 2 | 28.57% | 1 | 12.50% |
| I'd probably buy the <u>enriched white pasta</u> | 4 | 26.67% | 2 | 28.57% | 2 | 25.00% |
| I'd definitely buy the <u>enriched white pasta</u> | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Total | 15 | | 7 | | 8 | |
| Average | | | | | | |

14.e) If you were purchasing a single 1 lb (16 ounce) package of pasta at your local supermarket and you could choose between whole grain pasta (at \$1.79 for a 1 lb package) and the same brand of enriched white pasta (at \$1.49 for a 1 lb package), which type of pasta would you buy?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| I'd definitely buy the <u>whole grain pasta</u> | 4 | 40.00% | 3 | 50.00% | 1 | 25.00% |
| I'd probably buy the <u>whole grain pasta</u> | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>whole grain pasta</u> | 2 | 20.00% | 2 | 33.33% | 0 | 0.00% |
| I'd be unsure but leaning toward <u>enriched white pasta</u> | 1 | 10.00% | 0 | 0.00% | 1 | 25.00% |
| I'd probably buy the <u>enriched white pasta</u> | 2 | 20.00% | 0 | 0.00% | 2 | 50.00% |
| I'd definitely buy the <u>enriched white pasta</u> | 1 | 10.00% | 1 | 16.67% | 0 | 0.00% |
| Total | 10 | | 6 | | 4 | |
| Average | | | | | | |

15.a) Considering the choices you made in questions 12, 13, and 14, how important was **Preparation convenience?**

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 14 | 25.00% | 9 | 31.03% | 5 | 18.52% |
| 2 | 4 | 7.14% | 1 | 3.45% | 3 | 11.11% |
| Somewhat Imp3 | 20 | 35.71% | 8 | 27.59% | 12 | 44.44% |
| 4 | 8 | 14.29% | 6 | 20.69% | 2 | 7.41% |
| Very Important 5 | 10 | 17.86% | 5 | 17.24% | 5 | 18.52% |
| Total | 56 | | 29 | | 27 | |
| Average | | | | | | |

15.b) Considering the choices you made in questions 12, 13, and 14, how important was **Nutrition?**

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 1 | 1.64% | 1 | 3.13% | 0 | 0.00% |
| 2 | 3 | 4.92% | 2 | 6.25% | 1 | 3.45% |
| Somewhat Imp3 | 6 | 9.84% | 1 | 3.13% | 5 | 17.24% |
| 4 | 18 | 29.51% | 11 | 34.38% | 7 | 24.14% |
| Very Important 5 | 33 | 54.10% | 17 | 53.13% | 16 | 55.17% |
| Total | 61 | | 32 | | 29 | |
| Average | | | | | | |

15.c) Considering the choices you made in questions 12, 13, and 14, how important was **What Your Children Prefer?**

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 16 | 35.56% | 10 | 47.62% | 6 | 25.00% |
| 2 | 5 | 11.11% | 3 | 14.29% | 2 | 8.33% |
| Somewhat Imp3 | 8 | 17.78% | 4 | 19.05% | 4 | 16.67% |
| 4 | 4 | 8.89% | 1 | 4.76% | 3 | 12.50% |
| Very Important 5 | 12 | 26.67% | 3 | 14.29% | 9 | 37.50% |
| Total | 45 | | 21 | | 24 | |
| Average | | | | | | |

15.d) Considering the choices you made in questions 12, 13, and 14, how important was **Taste/Flavor?**

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 2 | 3.57% | 1 | 3.33% | 1 | 3.85% |
| 2 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Somewhat Imp3 | 8 | 14.29% | 6 | 20.00% | 2 | 7.69% |
| 4 | 23 | 41.07% | 13 | 43.33% | 10 | 38.46% |
| Very Important 5 | 23 | 41.07% | 10 | 33.33% | 13 | 50.00% |
| Total | 56 | | 30 | | 26 | |
| Average | | | | | | |

15.e) Considering the choices you made in questions 12, 13, and 14, how important was **Price?**

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 7 | 12.28% | 5 | 16.67% | 2 | 7.41% |
| 2 | 6 | 10.53% | 2 | 6.67% | 4 | 14.81% |
| Somewhat Imp3 | 16 | 28.07% | 10 | 33.33% | 6 | 22.22% |
| 4 | 16 | 28.07% | 8 | 26.67% | 8 | 29.63% |
| Very Important 5 | 12 | 21.05% | 5 | 16.67% | 7 | 25.93% |
| Total | 57 | | 30 | | 27 | |
| Average | | | | | | |

15.f) Considering the choices you made in questions 12, 13, and 14, how important was **Familiarity?**

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 5 | 8.77% | 3 | 10.71% | 2 | 6.90% |
| 2 | 6 | 10.53% | 2 | 7.14% | 4 | 13.79% |
| Somewhat Imp3 | 19 | 33.33% | 8 | 28.57% | 11 | 37.93% |
| 4 | 19 | 33.33% | 12 | 42.86% | 7 | 24.14% |
| Very Important 5 | 8 | 14.04% | 3 | 10.71% | 5 | 17.24% |
| Total | 57 | | 28 | | 29 | |
| Average | | | | | | |

15.g) Considering the choices you made in questions 12, 13, and 14, how important was **Your Preference for Less Processed Foods?**

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 6 | 10.91% | 3 | 10.71% | 3 | 11.11% |
| 2 | 3 | 5.45% | 2 | 7.14% | 1 | 3.70% |
| Somewhat Imp3 | 10 | 18.18% | 4 | 14.29% | 6 | 22.22% |
| 4 | 20 | 36.36% | 12 | 42.86% | 8 | 29.63% |
| Very Important 5 | 16 | 29.09% | 7 | 25.00% | 9 | 33.33% |
| Total | 55 | | 28 | | 27 | |
| Average | | | | | | |

15.h) Considering the choices you made in questions 12, 13, and 14, how important was **Health Reasons?**

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Not Important 1 | 1 | 1.67% | 1 | 3.23% | 0 | 0.00% |
| 2 | 1 | 1.67% | 1 | 3.23% | 0 | 0.00% |
| Somewhat Imp3 | 5 | 8.33% | 0 | 0.00% | 5 | 17.24% |
| 4 | 19 | 31.67% | 12 | 38.71% | 7 | 24.14% |
| Very Important 5 | 34 | 56.67% | 17 | 54.84% | 17 | 58.62% |
| Total | 60 | | 31 | | 29 | |
| Average | | | | | | |

16.a) Before receiving this survey, how would you have described your attitude toward whole grain foods?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|-----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Very Negative 1 | 1 | 1.61% | 0 | 0.00% | 1 | 3.45% |
| 2 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Neutral 3 | 15 | 24.19% | 6 | 18.18% | 9 | 31.03% |
| 4 | 9 | 14.52% | 7 | 21.21% | 2 | 6.90% |
| Very Positive 5 | 37 | 59.68% | 20 | 60.61% | 17 | 58.62% |
| Total | 62 | | 33 | | 29 | |
| Average | | | | | | |

16.b) After reading the information provided in this survey, how would you have described your attitude toward whole grain foods?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|-----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Very Negative 1 | 1 | 1.61% | 0 | 0.00% | 1 | 3.45% |
| 2 | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Neutral 3 | 9 | 14.52% | 6 | 18.18% | 9 | 31.03% |
| 4 | 10 | 16.13% | 7 | 21.21% | 2 | 6.90% |
| Very Positive 5 | 42 | 67.74% | 20 | 60.61% | 17 | 58.62% |
| Total | 62 | | 33 | | 29 | |
| Average | | | | | | |

Caloric Intake

Nutritionists recommend average daily caloric intakes that range from 1,600 calories/day for many sedentary women and older adults and up to 2,800 calories/day for teenage boys and active men.

17) About how many calories do you think are in McDonald's Big Mac? (*There are 495 calories in a Big Mac!!!!!!!!!!!!!!*)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| 100 or less | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| 350 | 4 | 6.45% | 2 | 6.06% | 2 | 6.90% |
| 600 | 14 | 22.58% | 9 | 27.27% | 5 | 17.24% |
| 850 | 19 | 30.65% | 11 | 33.33% | 8 | 27.59% |
| 1100 | 13 | 20.97% | 8 | 24.24% | 5 | 17.24% |
| more than 1100 | 12 | 19.35% | 3 | 9.09% | 9 | 31.03% |
| Total | 62 | | 33 | | 29 | |
| Average | | | | | | |

18) About how many calories do you think are in an average 12 ounce can of regular soda?
*(There are **110** calories in a regular 12 ounce can of soda.)*

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| less than 50 | 1 | 1.61% | 1 | 3.03% | 0 | 0.00% |
| 100 | 9 | 14.52% | 6 | 18.18% | 3 | 10.34% |
| 150 | 20 | 32.26% | 9 | 27.27% | 11 | 37.93% |
| 200 | 10 | 16.13% | 4 | 12.12% | 6 | 20.69% |
| 250 | 17 | 27.42% | 9 | 27.27% | 8 | 27.59% |
| more than 250 | 5 | 8.06% | 4 | 12.12% | 1 | 3.45% |
| Total | 62 | | 33 | | 29 | |
| Average | | | | | | |

In this part of the survey, we would like some background information about you. We would like to remind you that all of this information will be treated as confidential, and that the results of this survey will only be used in summary form.

19) What is your gender?

| Sex | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Male | 13 | 20.63% | 9 | 27.27% | 4 | 13.33% |
| Female | 50 | 79.37% | 24 | 72.73% | 26 | 86.67% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

20) Are you pregnant or nursing?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Yes | 1 | 1.59% | 1 | 3.03% | 0 | 0.00% |
| No | 62 | 98.41% | 32 | 96.97% | 30 | 100.00% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

21) In what year were you born?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| less than or equal to 25yrs of age | 1 | 1.59% | 1 | 3.03% | 0 | 0.00% |
| 26-40 yrs of age | 7 | 11.11% | 2 | 6.06% | 5 | 16.67% |
| 41-55 yrs of age | 21 | 33.33% | 11 | 33.33% | 10 | 33.33% |
| 56-70 yrs of age | 23 | 36.51% | 12 | 36.36% | 11 | 36.67% |
| greater than or equal to 71 yrs of age | 11 | 17.46% | 7 | 21.21% | 4 | 13.33% |
| Total | 63 | | 33 | | 30 | |
| Average Year | 1950.76 | | 1949.39 | | 1952.27 | |
| Average Age | 57.24 | | 58.61 | | 55.73 | |

22) Approximately what are your height and weight?

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|-------------------------------------|----------------|---------|-------------|---------|-------------|---------|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| less than or equal to 60 inches | 3 | 4.76% | 1 | 3.03% | 2 | 6.67% |
| 61-65 inches | 26 | 41.27% | 13 | 39.39% | 13 | 43.33% |
| 66-70 inches | 27 | 42.86% | 14 | 42.42% | 13 | 43.33% |
| 71-75 inches | 6 | 9.52% | 4 | 12.12% | 2 | 6.67% |
| greater than or equal to 76 inches | 1 | 1.59% | 1 | 3.03% | 0 | 0.00% |
| Total | 63 | | 33 | | 30 | |
| Average height in inches | 65.81 | | 66.30 | | 65.27 | |
| less than or equal to 120 pounds | 4 | 6.78% | 2 | 6.25% | 2 | 7.41% |
| 121-150 pounds | 19 | 32.20% | 9 | 28.13% | 10 | 37.04% |
| 151-180 pounds | 11 | 18.64% | 9 | 28.13% | 2 | 7.41% |
| 181-210 pounds | 15 | 25.42% | 7 | 21.88% | 8 | 29.63% |
| greater than or equal to 211 pounds | 10 | 16.95% | 5 | 15.63% | 5 | 18.52% |
| Total | 59 | | 32 | | 27 | |
| Average weight in pounds | 174.68 | | 173.00 | | 176.67 | |

23.a) Are you currently at or very close to what you would consider your ideal weight?
If your response to part 'a,' is Yes skip part 'b.'

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Yes | 18 | 28.57% | 11 | 33.33% | 7 | 23.33% |
| No | 45 | 71.43% | 22 | 66.67% | 23 | 76.67% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

b. i) Relative to your ideal weight, do you think you are currently **BELOW** ideal weight by about:

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| 5lbs | 1 | 100.00% | 1 | 100.00% | 0 | |
| 10lbs | 0 | 0.00% | 0 | 0.00% | 0 | |
| 15lbs | 0 | 0.00% | 0 | 0.00% | 0 | |
| 20lbs | 0 | 0.00% | 0 | 0.00% | 0 | |
| 25lbs | 0 | 0.00% | 0 | 0.00% | 0 | |
| Total | 1 | | 1 | | 0 | |
| Average | | | | | | |

b. ii) Relative to your ideal weight, do you think you are currently **Above** ideal weight by about:

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| 5lbs | 1 | 2.38% | 1 | 4.76% | 0 | 0.00% |
| 10lbs | 10 | 23.81% | 6 | 28.57% | 4 | 19.05% |
| 15lbs | 5 | 11.90% | 3 | 14.29% | 2 | 9.52% |
| 20lbs | 5 | 11.90% | 4 | 19.05% | 1 | 4.76% |
| 25lbs | 4 | 9.52% | 0 | 0.00% | 4 | 19.05% |
| 30lbs | 5 | 11.90% | 2 | 9.52% | 3 | 14.29% |
| 40lbs | 5 | 11.90% | 3 | 14.29% | 2 | 9.52% |
| 50lbs or more | 7 | 16.67% | 2 | 9.52% | 5 | 23.81% |
| Total | 42 | | 21 | | 21 | |
| Average | | | | | | |

24) On average, how many times do you eat out each week? (*Please choose only one answer.*)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---------------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Hardly ever | 19 | 30.65% | 12 | 37.50% | 7 | 23.33% |
| 1-3 times each week | 33 | 53.23% | 15 | 46.88% | 18 | 60.00% |
| 4-6 times each week | 7 | 11.29% | 3 | 9.38% | 4 | 13.33% |
| 7 or more times each week | 3 | 4.84% | 2 | 6.25% | 1 | 3.33% |
| Total | 62 | | 32 | | 30 | |
| Average | | | | | | |

25) On average, how many times per week do you exercise? (*Please choose only one response.*)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|---------------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Hardly ever | 15 | 23.81% | 10 | 30.30% | 5 | 16.67% |
| 1-3 times each week | 28 | 44.44% | 12 | 36.36% | 16 | 53.33% |
| 4-6 times each week | 19 | 30.16% | 10 | 30.30% | 9 | 30.00% |
| 7 or more times each week | 1 | 1.59% | 1 | 3.03% | 0 | 0.00% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

26) What is the highest level of education you have completed? (*Please mark only one response.*)

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Some high school | 2 | 3.17% | 2 | 6.06% | 0 | 0.00% |
| High school graduate | 11 | 17.46% | 5 | 15.15% | 6 | 20.00% |
| Some college | 28 | 44.44% | 14 | 42.42% | 14 | 46.67% |
| College graduate | 13 | 20.63% | 7 | 21.21% | 6 | 20.00% |
| Post graduate | 9 | 14.29% | 5 | 15.15% | 4 | 13.33% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

27) In order to evaluate if we are getting a cross section of all people, we would like to know your approximate 2007 household income before taxes. *(Please mark only one response.)*

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|-------------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Less than \$20,000 | 5 | 8.62% | 3 | 10.00% | 2 | 7.14% |
| \$20,000 up to \$30,000 | 6 | 10.34% | 4 | 13.33% | 2 | 7.14% |
| \$30,000 up to \$40,000 | 2 | 3.45% | 1 | 3.33% | 1 | 3.57% |
| \$40,000 up to \$50,000 | 9 | 15.52% | 6 | 20.00% | 3 | 10.71% |
| \$50,000 up to 70,000 | 10 | 17.24% | 3 | 10.00% | 7 | 25.00% |
| \$70,000 up to 100,000 | 12 | 20.69% | 6 | 20.00% | 6 | 21.43% |
| \$100,000 up to 150,000 | 10 | 17.24% | 4 | 13.33% | 6 | 21.43% |
| more than \$150,000 | 4 | 6.90% | 3 | 10.00% | 1 | 3.57% |
| Total | 58 | | 30 | | 28 | |
| Average | | | | | | |

28) Including yourself, how many people live in your household? *(Please fill in the blank.)*

| Number of People | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| 1 | 16 | 25.81% | 8 | 25.00% | 8 | 26.67% |
| 2 | 27 | 43.55% | 15 | 46.88% | 12 | 40.00% |
| 3 | 7 | 11.29% | 2 | 6.25% | 5 | 16.67% |
| 4 | 7 | 11.29% | 4 | 12.50% | 3 | 10.00% |
| 5 | 2 | 3.23% | 2 | 6.25% | 0 | 0.00% |
| 6 | 1 | 1.61% | 0 | 0.00% | 1 | 3.33% |
| 7 | 1 | 1.61% | 0 | 0.00% | 1 | 3.33% |
| 9 | 1 | 1.61% | 1 | 3.13% | 0 | 0.00% |
| Total | 62 | | 32 | | 30 | |
| Average | | | | | | |

29.a) Are there any children living in your household under age 6?

| Under Age 6 | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|----------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Yes | 7 | 11.11% | 4 | 12.12% | 3 | 10.00% |
| No | 56 | 88.89% | 29 | 87.88% | 27 | 90.00% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

29.b) Are there any children living in your household between the ages of 6 and 18?

| Between 6 and 18 | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Yes | 12 | 19.05% | 6 | 18.18% | 6 | 20.00% |
| No | 51 | 80.95% | 27 | 81.82% | 24 | 80.00% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

30) What is your marital status? *(Please mark only one response.)*

| Choice | <u>Overall</u> | | <u>Ver1</u> | | <u>Ver2</u> | |
|--------------------------|----------------|------------|-------------|------------|-------------|------------|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| Single | 7 | 11.11% | 3 | 9.09% | 4 | 13.33% |
| Married | 43 | 68.25% | 22 | 66.67% | 21 | 70.00% |
| Have partner (unmarried) | 1 | 1.59% | 1 | 3.03% | 0 | 0.00% |
| Divorced | 4 | 6.35% | 1 | 3.03% | 3 | 10.00% |
| Spouse Deceased | 8 | 12.70% | 6 | 18.18% | 2 | 6.67% |
| Total | 63 | | 33 | | 30 | |
| Average | | | | | | |

If you have additional comments or concerns about whole grain products or about this survey please use the space below to express them.

Your contribution to this project is greatly appreciated. Please check the survey to ensure that you have answered all of the questions. We have provided a postage paid envelope for you to return the completed survey. If you would like a copy of the results of this survey, please enclose a business card or a separate sheet of paper with your name and complete mailing address.

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Author _____

Willie Scott, Jr.

July, 2008

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(Department Chairman)

(Dean of Graduate Studies)

(Author)

(Date)

Date Submitted to the Dean's Office: _____